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MONTHLY LABOR REVIEW

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

+ HUGH S. HANNA, EDITOR +

CONTENTS

JULY 1939 Vol. 49 No. 1

Cover:
Spindletop Oil Field (Texas) in the late twenties.

Special articles: Page
Workers' education in the United States 1
Differences in living costs in northern and southern cities 22
Man-hour output and employment in petroleum and natural-gas production 39
Wages and income of farm workers, 1909 to 1938 59

Social security:
Old-age assistance in the United States, 1938 72
Characteristics of recipients of old-age assistance 74
French unemployment-insurance laws 76

Labor involved in industrial production:
Labor requirements in production and distribution of sand and gravel 87

Unemployed youth:
Measures to promote juvenile employment in Australia 92

Employment conditions and unemployment relief:
CCC activities for Indians 94
Factors affecting employee morale 96
Size and composition of rural relief families 97
Underemployment of cotton weavers in Lancashire 100

Cooperation:
Cooperatives in foreign countries, 1935 to 1937 104
Cooperative purchasing by farmers, 1937–38 131

Housing conditions:
Rent-control law of Cuba 133
Building and loan associations in Great Britain, 1938 135

Health and industrial hygiene:
Occupational-disease legislation of 1939 136

Labor laws and court decisions:
Recent decisions of interest to labor:
Ordinance restricting right of assembly held unconstitutional 140
Ruling on ratification of child-labor amendment 142
Banks and insurance companies under unemployment-compensation act 144
"Dismissal" under State unemployment-compensation act 145
Picketing of private dwelling held unlawful 146
Constitutional right to picket 146
Postponement of Arkansas workmen's compensation law 147

156184—39——1

	Page
Industrial disputes:	
Trend of strikes	148
Analysis of strikes in March 1939	149
Activities of United States Conciliation Service, May 1939	158
Industrial disputes in Great Britain and Northern Ireland, 1938	160
Wages and hours of labor:	
Annual earnings in radio manufacture, 1936	163
Earnings and hours in manufacture of electrical products: Part 2—Average hourly earnings, by industry divisions	176
Salaries of school employees, 1938–39	199
Canada—Wages in 1938	204
Netherlands—Wages and hours of seamen, Amsterdam, 1939	207
Labor turn-over:	
Labor turn-over in manufacturing, April 1939	209
Labor turn-over in cotton-textile industry, 1937 and 1938	213
Employment offices:	
Operations of United States Employment Service, May 1939	217
Building operations:	
Summary of building construction in principal cities, May 1939	224
Retail prices:	
Food prices in May 1939	229
Wholesale prices:	
Wholesale prices in May 1939	236
Trend of employment and pay rolls:	
Summary of reports for May 1939:	
Nonagricultural employment	241
Industrial and business employment	241
Public employment	245
Detailed reports for industrial and business employment, April 1939	247
Recent publications of labor interest	258

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Page
148
149
158
160
163
176
199
204
207
209
213
217
224
229
236
241
241
245
247
258

This Issue in Brief

Annual Earnings in Radio Manufacture.

Wage earners in plants manufacturing radio sets, parts, and tubes, whose employment extended over 12 months, averaged $1,199 in 1936. Including all workers employed 9 months or more, the average was $1,048, while for employees working 6 months or more it was $922. For all wage earners working any part of the year, the average annual earnings amounted to $828. Employees working throughout the year in plants manufacturing sets had average annual earnings of $1,351, whereas those in plants manufacturing parts and tubes averaged $1,093. These figures are based on annual earnings data obtained by the Bureau of Labor Statistics from 17 radio-manufacturing plants for the year 1936. Page 163.

Workers' Education.

Education directed especially to the needs of workers dates from immediately before the World War. Since that time workers' education has had its ups and downs—increasing in the early 1920's, subsiding in the later years of that decade, and reviving sharply with the period of the NRA. The past 5 years have witnessed a remarkable spread of interest in this field, not only under the adult-education program of the WPA, but also under programs of many of the international and even local unions. The present trends in the workers' education movement and a description of the work of individual labor and other organizations in this field are described in an article on page 1.

Old-Age Assistance.

During the 3 years of operation under the national social-security system the number of aged persons given old-age assistance has increased by 60 percent. Whereas in 1935, the last year under the old State systems, the sum of 65 million dollars was spent in 32 States which had this type of assistance in operation, by the end of 1938 the Federal system was Nation-wide and nearly 391 million dollars were being spent annually. The immediate effect of Federal participation (1936) was nearly to triple the number of beneficiaries, while the average benefit remained almost stationary; but the next year payments per beneficiary increased nearly 20 percent. For the year 1938 the average pension was $19.30 per month, an increase of 2.3 percent over 1937. Page 72.

Income of Farm Workers.

Earnings of hired farm workers averaged in 1938 about $300, including board and other perquisites, and the average amount of employment was about 7 months. The lowest point in farm wage rates during the past three decades was reached in 1933, when the weighted average rate was less than half the average rate during the years 1924 to 1929. In 1938, the average was still 30 percent lower than the 1924–29 average. These and related facts, including information about the wages of migratory farm workers, are presented in a summary of recent special studies and of revisions of data on farm wages and employment on page 59.

Cooperatives in Foreign Countries.

More than 127 million persons, in 61 countries, belonged to some kind of cooperative enterprise in 1937. Although 67½ million of them were in countries where the cooperative movement is no longer autonomous, and

another 5 million were in countries where it has lost its autonomy since 1937, nearly 55 million members were in countries where voluntary and democratic organization is still assured. Cooperative activity of all types (consumers', agricultural, credit, etc.) showed a considerable increase in most countries during the years 1935–37, reaching in many of them a point higher in 1937 than it had ever attained before. A survey of the movement from 1935 to 1937 is given on page 104.

Productivity in the Petroleum Industry.

For as far back as records are available the output per worker employed in petroleum and natural gas production has been tending upward. By far the most marked decrease in manpower requirements, according to a study just completed by the National Research Project of the Works Progress Administration and the United States Bureau of Mines, has occurred in the primary production branch of the industry. In that division, output per man-hour increased 850 percent between 1889 and 1935. Output per man has also increased substantially in petroleum refining and in 1937 the throughput of crude oil per man-hour was more than three times as great as in 1919. Comparable records for pipe-line transportation extend back only to 1922, but even within this short span of years the volume of crude petroleum and petroleum products handled per wage earner employed has increased approximately one-third. Page 39.

Underemployment of Cotton Weavers.

The prevailing system of keeping Lancashire, England, cotton weavers at work full time on less than their full complement of looms has brought about a reduction in weekly piece-rate earnings. As this type of underemployment is peculiar to the cotton industry and has become chronic, considerable study has been devoted to the existing level of earnings, and measures have been adopted looking toward a guaranteed minimum wage for all weavers. In an article on page 100 the results of a survey of underemployment in Lancashire are given. Of 17,617 cotton weavers in 5 Lancashire towns, nearly 60 percent experienced underemployment within a 6-week period during 1938 and the lowest percentage of underemployment was 39. In all, 20 percent of these weavers were underemployed throughout the entire period during which they worked.

French Unemployment-Insurance Law.

The unemployment-assistance and unemployment-insurance laws in France were codified and revised by a decree law issued in May 1939. The new legislation provides for the coordination and improvement of the work of the employment offices; establishes a means test as a requisite for the receipt of unemployment allowances; provides for the establishment of retraining centers; and increases the membership required in the insurance funds for the receipt of the State subsidy, in order to insure the financial stability of the funds. Page 76.

MONTHLY LABOR REVIEW

FOR JULY 1939

WORKERS' EDUCATION IN THE UNITED STATES [1]

By ELEANOR G. COIT and MARK STARR [2]

WORKERS' education activities began during the pre-war period. Projects were organized at that time by the Rand School in New York City and by the Women's Trade Union League. In the years following the war, there were "good times" in workers' education. The founding in 1921 of the Workers Education Bureau, Brookwood Labor College, and the Bryn Mawr Summer School for Women Workers gave new impetus to the movement, and many other projects followed. Other resident schools were started. Educational projects were initiated by State federations of labor (for example, in Pennsylvania) and by some political groups. Local labor colleges offering evening classes were established in various parts of the country, sometimes under the central labor union, as in the case of Boston, Baltimore, and Philadelphia, and sometimes under the auspices of other groups.

But the open-shop drive of certain manufacturers and the post-war slump sapped the strength of the unions. Then came the period of "business unionism," and during the feverish prosperity preceding 1929, labor was in the doldrums. The number of local labor colleges diminished and resident schools found themselves in the position of training active workers for whom there was apparently little place in a quiescent labor movement. During the depression it became doubly difficult to finance agencies which depended for the most part on voluntary and individual contributions.

Then came the NRA period; labor was revitalized, and within a few years trade-union membership soared from 3,000,000 to 8,000,000. Unions needed a whole host of new organizers, and many of them turned to workers' education agencies for trained people. (The Amalgamated Clothing Workers used 13 Brookwood graduates in its campaign to organize shirt factories in Pennsylvania alone.)

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[1] Much of the factual material in this article is based on reports presented to the 1939 Annual Conference of Teachers in Workers' Education, as summarized by Helen G. Norton and included in the findings of the conference, edited by Helen Herrmann.

[2] Miss Coit is director of the Affiliated Schools for Workers and Mr. Starr is educational director of the International Ladies' Garment Workers' Union.

Workers' education has not only kept pace with the growing movement but has made an even greater proportionate increase, aided particularly by some of the newer unions. Certainly, the demand for such education became greater. The existing agencies were called upon for their services as never before; new educational activities were organized by national and local unions; and the Federal Government established workers' education under the adult-education project of the WPA.

Within the past 5 years, therefore, definite gains have been made which have been held and which have greatly strengthened the movement. White-collar as well as industrial workers now take part. In addition to local study classes and resident schools, forums, recreational groups, and music and drama projects have been organized. Many labor institutes have been held in which the rank and file have participated, thus bringing new groups into contact with the movement. Gains have been made in using the work of union committees as a basis for informal education of the membership as a whole. Experiments are constantly being made in new methods of mass education, through movies and other visual material. Workers' education is more vital today and is more closely related to the activities of the labor movement than ever before.

Present Trends

Workers' education is growing in significance and importance. The more powerful the unions become in their industrial and political activity, the greater will be the need of workers for a fundamental understanding of social problems. Only a systematic study of the social sciences will give them the required knowledge. In addition, the unions have the double task of informing their own members concerning the methods and goals of the trade-unions, and of interpreting to other sections of the community their aims and purposes in relation to the welfare of society as a whole.

Those engaged in workers' education in this country have given special study to methods of teaching. This study has borne fruit in the developing curricula of the schools, and also in the advisory service, given by such groups as the Affiliated Schools for Workers, to other groups in the workers' education field. The resident school has provided an opportunity for experimentation and testing of techniques; but as the work has continued and as many nonresident projects have been developed, this concern with methods has widened to include experimentation in nonresident schools.

In a workers' education project, as in other adult-education activities, study is carried on in order to help the student gain further understanding of his every-day life. In a workers' education group, however, the student is impelled by an urgency which students of other

adult-education projects do not have. He knows that in order to meet the demands of his complex problems, he must be prepared to meet immediate situations in the area of interest in which he is carrying on his study.

His teacher, as in other adult schools, should be the best. The teacher must know the background of his students and relate his teaching to their experience. (Some actual industrial experience, while not indispensable, ranks high in the qualifications desired.) He recognizes that the curriculum must furnish the student with a background for understanding his position in a contemporary world, in order that he may take his place in that world, and assume his responsibility there. Study starts, therefore, at the point of the experience of the student. His various teachers then collaborate to integrate the material offered in economics, history, and literature, in order that the curriculum may center in students' problems and interpret them, rather than seem to isolate one subject from another.

The vitality of the movement today lies, in part, in the fact that workers' education has broadened its scope beyond the classroom, to include a wide variety of cultural and recreational activities. These include many types of projects—dramatics, visual and graphic presentation of material, radio, recreation, and music. The movement concerns itself also with the provision of health facilities for workers, vacation homes, and opportunities for members of the workers' families to have a good time under the auspices of the union.

This widening of workers' education is partly in response to the needs of new recruits in an expanded labor movement. The unions have found it necessary to carry on a program in which the young new members will participate and through which they may function, and new methods have had to be used. These developments in workers' education result also from new understanding and awareness of the resources for an educational program in dramatics, visual aids, and workshop methods.

Another tendency is the practical application of workers' education to the immediate needs of the labor unions to help them improve their efficiency, by research, publicity, information, and training services. This support is secured from unions which hitherto tended to regard workers' education as abstract and utopian.

More than ever before, trade-unions are recognizing the axiom that adult workers learn best if they approach their study as an interpretation of the problems which confront them in their every-day experience. They have readily found at their command means with which to stimulate further study. Such projects generally begin, not in the classroom, but within the union. Frequently the regular business of the union is used as a medium of study. Interpreting wage agreements, preparing for legislative activity, the training of shop stewards,

the work of union committees, have all proved excellent means of introducing members to an educational program. An example of this technique is found in Denver, where the business agents of the Building Trades Council prepared themselves for their work by having lectures on the provisions of the Federal Housing Act. In May 1939, a clinic was held in Kenosha, Wis., at which delegates of unions and educational groups dealt with internal union problems, such as making meetings attractive, etc. In other instances, unions have established classes in hospitalization and socialized medicine for the benefit of their members. In Pennsylvania, the rayon workers proved the value of health education by forming health committees to combat certain occupational diseases in their industry, which resulted in a survey of the industrial diseases of given industries and localities and the provision of medical services to counteract them.

The unions are gradually assuming wider responsibilities in community affairs, not only for standards in their own industries, but also for housing programs, for health and for general wage and hour standards, and for other questions of concern to the entire community. Thus a program of action and one of study are becoming more clearly integrated.

Along with the broadening of interest in the workers' education movement as here described, the subject matter and content of courses have also broadened to include many subjects of current interest to workers. For example, emphasis upon the point of view of the consumer has grown in workers' education classes. In addition to classes in consumer economics, there has been a wide use of Your Dollar (a Consumers' Union information service) in many labor papers, and the Consumers' Guide (AAA) receives considerable attention. The Consumers' Union reports that locals in 10 C. I. O. and in 8 A. F. of L. unions have organized consumer groups in connection with it.

There have been interesting developments, also, in the type of study materials available for workers' groups. During the last few years, these materials have reflected increasingly this new interest on the part of unions. For some years only a few groups, such as Brookwood Labor College, the Affiliated Schools for Workers, and the International Ladies' Garment Workers' Union, prepared materials for use by worker-students. Recently, however, many unions have instituted or enlarged their own work along these lines. Several nonlabor groups have also published material, particularly pamphlets, with the needs and interests of workers' groups in mind.

Other new trends in workers' education are seen in the financing of the program. Over a period of years, the movement has been largely supported by individuals in a given community, by general educational funds and, to some extent, by certain trade-unions. But public funds have not hitherto been available for workers' edu-

cation in this country as they have been abroad. Recently, however, funds available for workers' education have been increased, through the allocation of public funds to the WPA. School buildings in many places have been opened to workers' classes. Teachers paid by the Government have gone to union headquarters, community centers, farmhouses—wherever workers gather to learn. How far this trend toward the use of public funds for workers' education will serve as a basis for securing permanent public support cannot be foretold.

Wisconsin is the only State which has given financial aid to workers' education on a somewhat permanent basis. Since 1925, the Wisconsin Board of Regents has made a yearly grant to the Summer School for Workers in Industry at the University of Wisconsin. In 1937 funds were allocated for a permanent department within the university. During the last 2 years, as has been stated, the work of the school has been expanded beyond the 6-week summer course to include a year-round program of classes in rural and urban communities, working in cooperation with organized farmer and labor groups. A number of forces have combined to make this project unique. The advisory committee, including three representatives from the University of Wisconsin, has cooperated very closely with a committee of organized labor in planning the work of the school and in relating it to labor's needs.

The legislature voted a 2-year subsidy for this ambitious scheme of classes covering the farmers and the town workers. There was no question of the ability of the teachers or the efficiency of the administration. However, with the setback suffered by the progressive forces in the November 1938 election, the new State administration quickly eliminated this item from its budget. As a result, the continuance of this valuable State-wide work is endangered. The 6-weeks' school will continue in 1939 with limited support from public funds, but no provision was made for the workers' education by the 1939 legislature.

The lesson of Wisconsin may be that labor cannot with safety put all its eggs into the basket of a State subsidy in the matter of workers' education.

With the exception of an earlier experiment between the State Federation of Labor in California and the University of California, there is no other precedent in this country on which to base a program of workers' education supported by Government funds on a non-WPA basis. Those concerned in workers' education, however, are giving thought to the question as to whether the workers can count upon funds from public sources which would help them in carrying on their own educational program, without undue interference in matters of control. Whatever may be the future development, undoubtedly the desire for workers' education which has been created by the services

rendered by the WPA will result in greater responsibility for workers' education being undertaken by trade-unions and community groups.

Trade-unions are taking increasing financial responsibility for workers' education. Several important unions have set aside funds and have employed a staff of educational directors and teachers. Some unions have provided in their constitutions a definite per capita allowance for an educational program. These provisions, however, are not yet adequate to support existing workers' education institutions or meet the need for expansion of these facilities. Workers' education will not be permanently rooted until unions assume much wider financial responsibility for this important function of the labor movement.

In all this development of workers' education, there has arisen a somewhat closer relationship with the general adult-education program. Public-school officials, leaders in community agencies, and others concerned in the general adult-education field have become better acquainted with workers' education through cooperating with it during the last few years. Those engaged in workers' education, also, have realized the necessity of considering questions of method or content in which the two groups have a common interest.

In spite of the gains made so far, only the surface has been scratched. The need for workers' education is very great and its objectives are not yet clearly enough understood. There are great untapped resources for developing this program, and wider support must be secured for all groups which have skill to contribute to this movement. Labor in the United States is increasing in numerical strength and influence. Workers' education in the United States, if thus supported, will enable labor to meet that challenging situation and utilize its great opportunities.

Agencies in Workers' Education

There are several types of organizations which promote workers' education. With the exception of the WPA, the work is carried on in general through nongovernmental means. Many international unions now have educational departments, offering activities ranging from informal recreation to classes, forums, and leadership-training courses. In still other organizations, the locals have created their own programs. All types of union groups have extended their education activities.

In addition to these union activities, which will be described in more detail later, workers' education is also promoted through such national bodies as the Affiliated Schools for Workers (which maintains a labor-education service) and the Workers Education Bureau, through various resident schools, and by the workers' education program of the adult-education project of the WPA.

The various labor political groups run their own schools. In New York, for example, there are the Workers' School (Communist), the New Workers' School (Lovestonite), the Debs School (Socialist Party), and the Rand School (Social Democratic Federation). In most cases, these schools offer classes open to nonparty members but they are closely associated in the public mind with a particular political group.

RESIDENT SCHOOLS

Among the pioneers in the field of workers' education are the resident schools for workers. As their work has grown and enlarged, they have made a contribution both in content and in technique. Today there are seven resident schools, five of them associated with the Affiliated Schools for Workers.

These resident schools are Commonwealth College, Highlander Folk School, the Hudson Shore Labor School, the Pacific Coast School for Workers, the School for Workers at the University of Wisconsin, the Southern Summer School for Workers, and the Summer School for Office Workers. Their courses vary in length and purpose and their policies and programs reflect an attempt to meet the different needs. White-collar workers, as well as industrial workers, are among the students. Both men and women avail themselves of opportunities afforded by the schools. All are independent bodies governed by their own board of directors, but they are closely linked with the labor movement through cooperative relationships of many kinds. Their boards include trade-unionists and labor educators whose contacts give them wide experience with working-class groups. Scholarships to the schools are often raised through the help of unions. (Other financial support comes from scholarships raised through other sources, individual contributors, and from fees of nonscholarship students.)

Mention should be made here of the closing of *Brookwood Labor College* in 1937. Founded in 1921 at Katonah, N. Y., Brookwood was perhaps the outstanding labor school, but it fell victim to the prolonged economic depression. In its 16 years of existence, some 415 workers were graduated, many of whom are now union organizers and officers; others are in the field of workers' education. The school originally gave a 2-year course which was revised in 1929 to one 8-month term. Brookwood's publications and syllabi were widely used and it pioneered in the development of labor journalism courses, extension work, labor drama, and the traveling labor chautauqua.

Commomwealth College, at Mena, Ark., was founded in 1923. It is a resident school, now concerned chiefly with the problems of the workers of the Southwest. Both winter and summer sessions are usually held, with courses in labor history, economics, union methods, labor journalism, and dramatics. Students come from various parts

of the country, and in the summer months they include professional people interested in spending their vacations at a labor school. Commonwealth is operated on a cooperative basis, with both teachers and students participating in the work of the farm and the manual work of the school. During the winter of 1939 the entire staff was engaged in field projects.

The Hudson Shore Labor School (formerly Bryn Mawr Summer School) opened its new quarters in the spring of 1939 at West Park, N. Y. As usual the students have been recruited nationally, with the largest proportion from the East and East Central States. A 7-week summer session such as has been conducted on the campus of Bryn Mawr College for the last 18 years, forms the center of the school program. Sixty woman industrial workers will come together there to discuss their current economic problems. Facilities are also available throughout the year for short institutes conducted for various unions. The unions plan and finance such institutes, but the school cooperates in setting up the educational program. Institutes were run there in 1939 by the American Federation of Hosiery Workers and the International Ladies' Garment Workers' Union.

The School for Workers, University of Wisconsin, draws its students entirely from Middle Western States, and its program reflects the trend of the labor movement in that section. Men and women come from a variety of trades, meeting at the school for a period of 6 weeks. In addition, short institutes are conducted in cooperation with various unions. In 1938, these included one for Wisconsin locals of truck drivers, one for the midwestern locals of the International Ladies' Garment Workers' Union, and one attended by members of several different unions.

Perhaps the most promising development of this school, however, has been the program of local classes carried on all over Wisconsin. Classes have been held (in 33 cities and 9 counties) in economics and labor problems, economics of various industries, public speaking, effective writing, parliamentary law, and economic history. Rural workers as well as urban workers took part in this program. In addition, opportunities for study by teachers in workers' classes have been included in the general program. In 1938–39, 25 teachers were employed in the urban program, and about 35 in the rural program. Among the teachers were many WPA instructors, as the WPA workers' education project in Wisconsin has been under the sponsorship of the School for Workers.[3]

The Southern Summer School for Workers has carried on a unique piece of labor education in the South during the last 13 years. A summer school has been conducted each year. The school has also broadened its activities to include not only the 6-week course for men

[3] See p. 5 for recent developments affecting the future of this program.

and women and for agricultural as well as industrial workers, but in addition a winter program of conference and other local educational activity. In 1938 and 1939 the sessions were held at Asheville, N. C.

Highlander Folk School, also a southern school, is located in Monteagle, Tenn., and is conducted on a somewhat different basis. The community educational program for the mountain people in that area is an important part of the activity through which health, recreational, and other community services are carried on. Two resident terms of 6 weeks each are held—one in the summer and one in the winter. The curriculum includes: "How to build the union," labor history, economics, public speaking and parliamentary law, journalism, dramatics, and cooperatives.

The Pacific Coast School is likewise a sectional school, serving the interests of men and women who live in that part of the country. During its 4-week summer course at Berkeley, Calif., the subjects offered include labor history, labor economics, agricultural economics, labor journalism, English, European social and political movements, negotiations and arbitration, and public speaking. Winter work of the school was extended in 1938–39 to include classes in San Francisco (extemporaneous speaking) and Oakland (lessons from labor history), organized by special arrangement with local bodies.

The Summer School for Office Workers is the only school planned especially for white-collar workers, although such workers are included in the student bodies of several other schools. A 4-week school and a 2-week institute are carried on, planned in accordance with the vacation schedule of the students who come from all parts of the country except the Pacific coast. In addition, a seminar for prospective teachers of workers' classes is also held. Facilities were made available in 1938 and 1939 by the Chicago Theological Seminary and the University of Chicago.

The curricula as worked out in the Hudson Shore, Southern, Wisconsin, and Office Workers' Schools have a certain uniformity. These schools, together with the Affiliated Schools organization with which they have long been associated, have given much time and thought to methods of teaching adult workers, carrying on this study over a period of years through analysis and experimentation. Each group has developed its program or met the special problems of its own area in terms of the special interests of the students attending. In all the schools, however, it has been the purpose to help the student body analyze the economic forces which impinge on their experience, and to give them tools with which to work in continuing their study and activity after leaving the school. The schools have adapted their programs to changing conditions from year to year, and new trends today reflect new needs, as illustrated by the new short courses and union institutes which now supplement the longer sessions. Perhaps

one of the most outstanding developments of these schools has been their contribution to a knowledge of methods of teaching in the field of workers' education.

TRADE-UNION EDUCATIONAL WORK

More and more are trade-unions realizing the great importance of workers' education. Within recent years the movement has been gaining headway steadily, and the variety of classes and projects offered has grown immensely. With the great influx of new members into the older unions and the organization of unions in new industries, this type of workers' education is displaying two tendencies away from the old-time courses in formal economics and history. On the one hand, there is a great deal of practical training in the day-to-day handling of union affairs; on the other, a great many recreational and cultural activities.

The following snapshots of recent union educational work show its vitality and variety: A union makes dramatic history by the production of "Pins and Needles," and other unions are influenced to use the musical revue as an effective agency in matters of social significance. . . The Steel Workers' Organizing Committee calls foremen and employers' representatives into joint classes with union representatives to study how grievances and production problems can be effectively handled. . . . Four thousand recruits of the Amalgamated Clothing Workers in Cincinnati take a solemn mass obligation, with appropriate music by a labor choir. . . . The A. F. of L. union label department holds huge exhibits in San Francisco and Cincinnati. . . . In St. Louis, a pageant on the union's history is staged in the Municipal Auditorium by 400 members of the International Ladies' Garment Workers' Union. . . . The Transport Workers in New York alone had 4 baseball leagues with 34 teams. . . . Six international unions take over a Pennsylvania camp for the summer, for study, recreation, and sports. . . . Unions run their own health centers, movie shows, summer schools, institutes, excursions, libraries, youth groups, consumers' clubs, song fests, bands, and radio programs, and fish fries. This is union workers' education, new in extent and variety, spreading through the United States.

The International Ladies' Garment Workers' Union formed its educational department in 1917. Now (1939) it has more than 25,000 students in 620 classes and groups in 58 cities throughout the country. In addition to the national educational staff, there are educational directors in 25 local unions from Houston, Tex., to Montreal, Canada, and from Boston to San Francisco. This work is financed jointly by the I. L. G. W. U. and its joint boards or locals. The union in 1937 granted 18 scholarships at workers' summer schools and colleges, and held 5 labor institutes. Two institutes were run at Vineyard

Shore in 1938; one for 10 days as part of the regular School for Workers at the University of Wisconsin. This was attended by 40 local leaders from the midwest region. The three institutes will be repeated in 1939. A program of mass education, calculated to reach the I. L. G. W. U.'s 262,000 members, includes popular lectures, movies, musical, dramatic, and radio programs, hikes, and excursions. Labor Stage Studios (the old-time Princess Theater) in New York City is a cultural center for labor-dramatics groups, a 90-piece mandolin orchestra, a mixed chorus of 120 voices, a string orchestra, a brass band, and dancing groups, and was the scene of production of "Pins and Needles." Athletic activities are maintained by many locals.

The educational department's current publication list includes 60 items, of which 200,000 copies were sold and distributed in 1934–38. The most popular of these is the Handbook of Trade Union Methods, of which 15,000 copies were sold in 6 months. Victrola records of union songs, music scores for choirs, film strips, and other visual aids are issued. Additional services for members are provided by the Union Health Center and the summer vacation center, Unity House.

In order to be eligible for paid offices in the I. L. G. W. U., candidates who have not served previously must now take a prescribed "officers' qualification course." Over 300 members in New York took such courses in the 1938–39 term. Classes included history of the union, economics of the garment industry, trade-union service, and parliamentary law. An average of 75 percent in attendance and class work was required, and students absent for more than two sessions (unless on union business) were dropped from the course. Similar "civil service" training was given in other cities.

The *Amalgamated Clothing Workers*, in common with the other needle-trades unions, has had a tradition of education, rooted in the eagerness of immigrant workers to adjust themselves to the New World, and to acquire stores of knowledge closed to many of them under Old World oppression. With the influx of thousands of new members within the last few years, a fresh educational problem had to be undertaken. A centralized "department of cultural activities" was created in 1938 and 8 regional conferences were held to inaugurate the programs which include radio broadcasts, music, dancing, parental education, dramatics, children's groups, study and sport groups, in addition to lectures and movie showings. Five educational organizers were employed, and work was begun in Boston, Rochester, Philadelphia, New Jersey, and eastern Pennsylvania.

Correspondence courses are also provided in 5 subjects; these had an enrollment of 900 in 1939. Scholarships for the summer camp at Racoon Creek, Pa., are offered to students completing a special 6-week study course.

The Laundry Workers' Joint Board of New York, an A. C. W. A. affiliate, also has a comprehensive educational and recreational program.

The monthly journal of the Amalgamated devotes considerable space to these activities and a news letter is issued at frequent intervals. A pamphlet, Union Rules of Order, has been widely used. An illustrated booklet, The Amalgamated Today and Tomorrow, was issued in 1939.

The *American Federation of Hosiery Workers*, which has for many years encouraged educational work in its locals, voted at its 1937 convention to establish an educational department, and an experienced educational director was appointed. Outlines on such subjects as parliamentary law, "how to start classes," a pamphlet history of the union, and a guide for local publicity committees have been issued.

Formal class work is carried on by about 20 of the 100 locals of the A. F. H. W. These include the large locals—Philadelphia, Reading, Milwaukee, Indianapolis, Minneapolis, and Paterson—and many smaller branches. These locals cover 60 to 70 percent of the membership, although in many communities attendance is small. In 1937–38 more than 500 students attended study classes regularly, and 1,500 participated in recreation.

Most of the classes are conducted by the local union itself with WPA help or with teachers paid by the local. In some places, such as Milwaukee and Minneapolis, the organization works with a local labor college or with other unions. In most of these communities, particularly the larger ones, a considerable amount of recreational activities, such as children's and adults' tap dancing, is also provided. Most locals have some athletic activity, bowling being most popular.

In addition, the A. F. H. W. organizes institutes for training its active members. In the summer of 1938, 3 of these were held—1 for a week in eastern Pennsylvania, and 2 for week-ends, in the South, at Highlander Folk School and Southern Summer School. The total attendance was about 150. Five training institutes are planned for the summer of 1939, 2 for a week each in Eastern Pennsylvania, a similar one at the Wisconsin School for Workers, and 2 week-end institutes in the South.

Some training for shop-committee men is carried on at discussion groups led by outstanding experts, including the impartial chairman in the industry. Five such sessions were held in 1938, 2 in suburban Philadelphia areas, 2 in the Midwest, and 1 in Reading, Pa. Attendance at each was about 100.

The union has its own motion-picture camera and projector, and makes considerable use of movies with an average of two showings per week. Most of these are at regular meetings of local unions.

The new unions in automobiles, rubber, transport, steel, radio, etc., have developed education and recreation programs. The *Transport Workers' Union* in its first convention in 1937 provided for an extensive program headed by a full-time educational director because "the very life blood of our organization depends upon the adequate training of the membership in trade-unionism, self-government, and the processes of industrial democracy."

A program of trade classes and workers' education is carried on by the New York locals. Total attendance for the fall and winter terms of 1937–38 was 1,556. Morning and evening classes are held to accommodate different shifts of workers. The sports program, which attracts 1,500 additional members, includes baseball, basketball, bowling, and track. In 1938 there were 34 baseball teams organized in 4 leagues. The Women's Auxiliary has a program of lectures and music, and is responsible for the children's classes in dancing and puppetry which are conducted by WPA teachers.

The 4-year-old *United Rubber Workers* had accumulated by 1938 an educational fund of nearly $6,000 by alloting 2 cents out of the $1 monthly dues, and put one of its vice presidents and two assistants in charge of education and research. A labor college was conducted in Akron that summer, attended by representatives of all the locals in that area. The course ran for 4 months, with an average daily attendance of 40. A workers' education conference was held at Antioch College (Yellow Springs, Ohio) at which leadership training, handling of grievances, and other collective-bargaining procedures were discussed. The international union cooperates with its locals and with such agencies as the WPA and Wisconsin University in promoting educational projects.

An Organizers' Information Bulletin is issued monthly to supply data on wages, hours, and conditions in the industry, and research material on general economic conditions.

The Steel Workers' Organizing Committee obtained the free use of a CCC recreation camp near Salisbury, Pa., for 2 weeks in the summer of 1938, during which 135 officers and committee members from 33 local unions were brought in for a program that combined study and recreation. Discussion of such problems as collective-bargaining and grievance-adjustment procedures were led by S. W. O. C. staff members.

A similar camp at Racoon Creek, near Pittsburgh, will be used in the summer of 1939 for training courses and recreation, by the S. W. O. C. jointly with the Electrical and Radio Workers, the Rubber Workers, the Aluminum Workers, the Flat Glass Workers Federation, and the Amalgamated Clothing Workers.

Officers' training conferences were also held in 17 steel centers in Pennsylvania, Ohio, New Jersey, and New York in 1938, most of

the discussion being devoted to practical problems of union administration. Regular programs of motion pictures have been provided for several locals through the cooperation of the WPA.

The *Textile Workers' Organizing Committee* has had a special educational problem in its vast numbers of new members who knew very little about unionism. Activities include the formation of women's auxiliaries, whose chief functions are to create a demand for union-made goods among women and to foster recreational activities. Junior unions have been organized for the children, and every effort is made to bring the whole family into the life of the union. Dramatics and movies have proved very popular.

In classes dealing with the technological aspects of the industry, T. W. O. C. members learn the history, development, and economic import of their industry, how to participate in contract negotiations, how to make time studies, etc. Committee membership is also an educational activity. In the rayon industry, where a serious health hazard exists, the union committee designated to deal with the situation was forced first to educate itself on the situation, then to educate the membership on the facts uncovered.

In 1937–38, four 10-week sessions were held in Washington, D. C. by the *United Federal Workers*, with constantly increasing attendance, the last session having nearly 1,000 participants. Classes are formed on the basis of need, one having been a class in the social and economic background of the railway industry for Social Security employees handling railroad cases, in which 100 enrolled.

Attendance at the school is not limited to Government employees and students have come from 20 different unions. In many cases, the school and its classes have served as a union recruiting agency, many new members having been signed up as a result. In addition to classes, forums are run; also drama groups, dancing, and entertainment. A summer camp is being conducted in 1939 in conjunction with a Government welfare association, the Federal Workers to handle the educational program and the association the culinary department.

Most of the 85 locals of the *United Office and Professional Workers* now have educational committees which plan activities that vary from locality to locality, and include dances, inter- and intra-union basketball games, swimming contests, classes in the theories of trade-unionism and in economics, choral, orchestral and dramatic groups, forums on current events, health, art, literary topics, social psychology, the National Labor Relations Board, and the American Labor Party. The Book and Magazine Guild in New York conducts a variety of vocational classes. The New York Joint Council, composed of representatives of all New York locals of the U. O. P. W. A., has a diversified program open to all members in New York. It also has

inaugurated a health program, a play contest in cooperation with the New Theatre League; and a consumer service in cooperation with Consumers' Union.

Before internal troubles arose, the *United Automobile Workers* was outstanding among the new unions for its educational work. Its constitution provides that in both the local and international treasuries, 2½ percent of the dues shall be set aside for education. The educational director's report to the 1937 convention showed that in the 10 preceding months, 783 auto workers had attended 203 weekly evening classes in 16 automobile centers in Michigan, Ohio, Indiana, Wisconsin, and Missouri. Some 300 students from 66 locals attended the 8-day summer schools conducted by the department, and 8 members went on union scholarships to the 6-week workers' summer schools at Berkeley, Calif., and Madison, Wis. Pamphlets on the duties of shop stewards and methods of collective bargaining, occupational diseases, the Wagner Act, "You Auto Know," etc., were published, and large quantities of material from other unions and labor schools were purchased for class use. Baseball teams in 28 locals, a class to train calisthenics teachers, a union bowling tournament, and a football league were features of the athletic program. A daily radio program was given from Detroit. Movies of organizational and educational activities have been made in cooperation with the Film and Photo League.

Both unions resulting from the split in the U. A. W. are likely to continue this work, in view of the demand previously created.

At the 1937 convention of the *United Electrical and Radio Workers*, two pages of President James Carey's address were devoted to outlining an educational program to develop leadership, research, and local classes. The *Federation of Architects, Engineers, Chemists and Technicians* in 1937 ran a school in New York City with facilities for 600 students in which technical and vocational work was combined with courses in the social sciences. Such unions as the *Marine and Shipbuilding Workers*, the *Oil Workers*, the *American Communications Association*, and local 9 of the *Municipal Workers*, report study classes, forums, and athletic activities. The *Agricultural and Cannery Workers* at its first convention (1937) voted a 1-cent per capita tax for workers' education. The constitution of the *Flat Glass Workers*, adopted in the same year, provided for a Nation-wide educational scheme.

The *Upholstery Workers' International Union* has classes in 17 cities, including 2 in Canada. The international office recommends to its locals a course in three subjects—"You, Your Union, and the Government," an officers' training course, and one in public speaking and parliamentary procedure combined. Mimeographed material on the duties and functions of officers, economics of the industry, etc., is sent out for the use of the classes. WPA teachers are utilized

where they are available. In Canada, assistance is obtained from the Workers' Educational Association. Sports activities are also maintained in many cities.

Local 24 of the *United Hatters, Cap, and Millinery Workers* in New York had a program of classes in 1938. This year (1939) it sent students to the Rand School and the Women's Trade Union League. The union gives scholarships to both these institutions, as well as to the workers' summer schools at which it has had students for a number of years. The local has its own sport and recreation groups, including basketball, baseball, and soft-ball teams, hikes, excursions, etc.

The *American Federation of Teachers* in 1938 created a national workers' education committee whose functions are (1) to inform the teachers themselves about workers' education and about labor and (2) to secure their assistance for educational activities among other international and local unions. Local 5, New York, offers classes in labor topics along with "alertness" credit courses. At its annual educational conference in 1939, some 3,300 teachers, parents, and laymen participated in a series of 10 panel discussions on "Education for Democracy."

The *Ohio State Federation of Labor* appointed an educational director in 1937 and arranged an extensive program of radio talks and institutes.

In Wisconsin, 17 workers' education councils representing both A. F. of L. and C. I. O. unions were formed in as many cities in 1937, and 2 State-wide conferences have been held.

LOCAL LABOR COLLEGES

In the early days of workers' education, there were many local labor colleges in various sections of the country which were open to members of all unions in the particular locality. They are not so numerous now, partly because the WPA classes now cater for local unions, partly because more international unions are conducting their own work. Such projects may, however, be found in such widely separated centers as New Haven, Pittsburgh, Denver, Minneapolis, and Milwaukee.

The New Haven Labor College has stood the test of many years. Its classes are attended by students of many trades. The college at present is sponsored by the Labor and Religion Foundation and is staffed largely by instructors from Yale University who give their services free. Classes meet one evening a week in quarters provided by the university. The 1938 registration was 120, representing a larger number of unions than in the past, including the I. L. G. W. U. and the A. C. W. A., the cigar makers, typographers, machinists,

brewery workers, carpenters, and employees of the Connecticut Department of Labor.

The *Federation of Workers' Schools* of western Pennsylvania is a new project in this important steel area. Here local teachers also offer their services. The secretary reports:

> In 1936–37 the most immediate need was for tool courses, parliamentary procedure, public speaking, elementary grievance procedure, etc. After 2 years of more or less concentrated work in this field, we developed a good many excellent parliamentarians and were ready for more advanced work. Because there were not enough people in any one local union to justify an advanced course and because of the problem of obtaining and paying qualified teachers, centralized courses were developed.
>
> The experiment was entirely successful. The people who came to the central courses in Pittsburgh were union officers, grievance-committee men, education chairmen, etc. The 10 central courses embraced teachers' training, public speaking, labor problems, current events, practical politics, as well as recreational courses in dramatics and puppet making. Ten classes were also held in outlying communities, including New Kensington, Jeanette, East Pittsburgh, Carnegie, Homestead, Blawnox, and Etna. The 20 classes reached 500 people. Forums were conducted in New Kensington, and for the electrical workers in Pittsburgh. An innovation was the introduction of the "quiz program." Hundreds of questions were compiled, which were mailed to various locals with instructions urging them to conduct their own quizzes. When that was not feasible, we sent along "Professor Quizzes." Forty such quizzes in different communities were directed by people sent from central headquarters. We booked movies for 10 different communities and acquired a movie projector. We estimate that by way of speakers, quizzes, and movies, at least 15,000 people were reached.

The *Denver Labor College*, which was revived in 1938 after several years of inactivity, cooperated with the Social Security Board in a series of forums.

A new labor college, the *Minneapolis Labor School*, was organized in 1936 under a Workers' Education Council composed of representatives of local unions, cooperatives, and fraternal groups. Teachers are supplied by the WPA. For the year 1937–38, the school reported 38 classes in 19 subjects, with 333 students. Tuition fees are $3 per session. Weekly forums have been run, and a library serviced by the WPA is kept open daily. Unions have been assisted in the training of officers and in special union-history classes. A union sports council was created and operated from the labor school. Fifty field classes outside the Minneapolis area were also conducted by WPA teachers. The Workers' Education Council works in close cooperation with the education committee of the A. F. of L. central labor body.

The *Milwaukee Labor College* under the sponsorship of the Federated Trades Council, has carried on classes during the past winter, with teachers from the staff of the year-round program of the School for Workers, University of Wisconsin. Classes have been held in labor problems, labor history, collective bargaining, parliamentary law, current events, trade-unionism, consumers' problems, labor and the law, public speaking, and social psychology.

OTHER LOCAL GROUPS

Many community groups have recently broadened their programs to cover activities which may be included in this story. For many years, the Young Women's Christian Association, through its industrial department, has organized its program around the economic interests of workers, attempting—especially with unorganized workers—to help them discover their relation to the world in which they live, through a better understanding of its economic and social problems. The work is carried on through educational projects of many kinds, as well as through more formal classes. In 1937, there were 915 industrial groups in 420 associations; and 34,940 individuals took part in the groups.

A training course for trade-union participation in public affairs was run by the New York branch of the *Women's Trade Union League* in 1938–39. Students were sent out to interview various experts, and to attend legislative hearings, etc. In addition, each student was assigned to work with one of the league's five public affairs committees—on housing, labor legislation, public health, civil liberties, and consumer problems.

A training course in trade-union tactics was also given, during which the students acted as a mock central labor body which considered requests for organizational help, gave advice in strikes, and considered proposed union contracts. Thirteen other courses were given, covering various phases of economics, English, and cultural subjects.

The Boston League has had special classes for laundry workers, beauticians, candy workers, box makers, and others. In Washington, D. C., the league has cooperated with the United Federal Workers' School, and in Chicago with the Chicago Labor College which was under the auspices of the Chicago Federation of Labor.

More recently the social settlements have given further emphasis to an educational program which helps the workers who participate in these activities to interpret the economic problems of their everyday life, thus adding these workers to those who took part in workers' education in a number of communities, notably in New York City and Chicago.

The Henry Street Settlement in New York City has a workers' education center which is now in its fifth year. It has a regular program of classes ranging all the way from elementary English to social psychology, and uses teachers from both the WPA workers' education and adult-education groups. The students—about 500—are residents of the neighborhood and constitute a mixture of nationalities and backgrounds. Visual aids, such as movies and exhibits, are used to supplement forum talks. Recently, when the topic was pneumonia and diphtheria, a small laboratory was set up so that people could see how a patient's sputum was typed in the treatment

of pneumonia. A civic education committee, formed 2 years ago, follows what is happening in city, State, and National Governments and spreads information on issues of interest to the neighborhood. This is described as "an experiment in practical civic education, based on the realities of the present instead of the glories of the past."

In Chicago, two groups which have had workers' education programs are the Chicago Commons and Hull House.

NATIONAL AGENCIES

As is obvious from the foregoing discussion, workers' education activities in the United States, in contrast to those of many other countries, have not been conducted under one national agency. Nevertheless certain coordination has been successfully effected through the activities of various bodies.

The *Workers Education Bureau,* formed in 1921 as a clearing house for workers' education groups, is now the official educational agency of the American Federation of Labor. Its program has covered different types of work during the past 18 years, including the publication of books and pamphlets, a workers' education news service, a lecture service to trade-unions, etc. At various times it has had field representatives stationed in different parts of the country, notably in California under a cooperative arrangement with the university extension department. At present, emphasis is placed on week-end and other institutes in cooperation with State federations, radio talks, correspondence courses in public speaking, and the publication of leaflets. Dialogues on various phases of social security and collective bargaining, prepared in connection with the Baltimore Federation of Labor, have been used by unions. A second series of regional conferences for organizers was planned for the summer of 1939. For the last 9 years, a labor institute has been held at Rutgers University under the auspices of the W. E. B., the New Jersey Federation of Labor, and the university. The W. E. B. is financed by grants from the A. F. of L. and foundations, and by affiliation fees of unions.

The *Workers' Education Project of the Works Progress Administration* has considerably broadened the base of workers' education since it was established in 1933 by the Federal Government as part of a plan for putting unemployed teachers to work. The national office of the specialist in workers' education under the WPA in Washington serves as a clearing house for local WPA programs and carries on a Nation-wide program of education and interpretation, stimulating new interest in communities, preparing material, and advising on technical questions.

Nonresident local educational projects in 35 States have utilized the services of from 500 to 1,000 teachers each year. According to the 1938 report of the specialist in workers' education, 520 teachers were then employed, with 38,000 workers enrolled in industrial centers

and rural districts. The WPA workers' education project in New York City reported for the 4 months ending January 31, 1939, an average enrollment in classes of 1,471 and at recreation groups of 2,193.

In Philadelphia, where the WPA has from the first been able to work closely with the trade-unions, a summer program of athletics and recreation for 1939 was announced in which 2,000 members of some 20 unions were expected to participate.

The work is usually administered directly by the WPA or through State or city agencies. In many cases, however, teachers are loaned to unions, Y. W. C. A. settlements, and other groups. Trade-unions have benefited greatly from WPA assistance and in many instances educational work would not have been possible except for WPA teachers.

Subjects taught have included current events, English, public speaking and parliamentary procedure, history and principles of unionism, history of the cooperative movement, Negro problems, labor drama, group singing, etc. Many recreational groups have also been formed.

The Affiliated Schools for Workers is another national agency carrying responsibility for certain coordinating functions. It offers, through its labor education service, educational facilities to trade-unions, workers' education committees, clubs and classes, local labor colleges, community groups, etc. Over 100 trade-unions use this service, and in the case of one international union 38 locals have been affected.

This organization was originally a loose federation of workers' schools, coordinating the activities of the workers' summer schools. Within recent years, however, its functions have grown until its services are now available to all types of workers' groups. It aids local bodies throughout the country in their educational problems, and in the organization of general and specific educational activities. It provides technical advisory services and issues bibliographies. It also prepares and issues study material for local classes. These publications include such pamphlets as An Introduction to American Trade-Unionism and The Worker and Government, an annotated list of material for various types of classes, lists of labor plays and social literature, pamphlets discussing methods of teaching, and the Affiliated Schools Scrapbook which is designed to give a practical aid to groups engaged in workers' education.

The Affiliated Schools conducts regional conferences in the East, the South, and the Middle West. The New England conference, held early in 1939 in Boston, illustrates one of the methods used in developing a workers' education program with groups from various communities. Representatives of 26 A. F. of L. and C. I. O. unions and of many other workers' groups came together from 44 communities, to

talk about a program of workers' education in New England. Methods of carrying on labor drama and other programs were discussed. A special meeting for teachers was held, in order to interest larger numbers of teachers who might offer their services for workers' classes. A program of dramatics and music as well as an exhibit of material for workers' classes was arranged, in order to suggest other methods of conducting workers' education.

A program of teacher preparation has been developed by the Affiliated Schools, and seminars are held in various parts of the country for teachers new in the field of workers' education.

An informal but effective means of coordination and interchange of information and opinion in the workers' education movement has been the *Washington's Birthday Conference of Teachers in Workers' Education* which has been held annually, beginning in 1924, under the auspices of Brookwood Local 189 of the American Federation of Teachers. Since the closing of Brookwood, the Affiliated Schools has taken the primary responsibility, with the cooperation of other agencies, in continuing these conferences. This year the conference was attended by 149 delegates from 12 States and 36 organizations.[4]

[4] The proceedings of the 1939 conference can be obtained from the Labor Education Service of the Affiliated Schools for Workers, 437 West 59th Street, New York, N. Y.

DIFFERENCES IN LIVING COSTS IN NORTHERN AND SOUTHERN CITIES[1]

Nature of the Study

THE Bureau of Labor Statistics recently made a survey of living costs in five northern and five southern cities. This survey was undertaken at the request of the Wage and Hour Division, in order to supply information on questions arising in the administration of the Fair Labor Standards Act of 1937.

The object of the inquiry was to ascertain what differences, if any, exist between northern and southern cities of approximately the same size in expenditures necessary to maintain the same level of living. That is to say, for any given expenditure in northern cities, what expenditure in southern cities of about the same size will provide an equivalent living? To answer this question, living costs in the two regions had to be compared. Thus, the term "living costs" as here used means the expenditures necessary to purchase a given level of economic well-being.

This comparison between expenditures required to purchase a given level of family living in different places has sometimes been confused with an entirely different type of comparison, that between the money expenditures families actually made in different places. Differences between expenditures actually made by families in two different regions are chiefly a reflection of differences in income. It would be clearly improper, therefore, to use differences in expenditures actually made, a result of differences in income, to determine differences in income needed to maintain a given level of living. Such a procedure could result only in the perpetuation of existing differences in wages, without any reference to their ability to support equally satisfactory manners of living. It is clear, therefore, that the comparison must be made of the costs required to purchase the same level of well-being in the regions compared.

The difficulties in the way of this comparison are serious. Perfect results cannot be expected. In the present study, one difficulty has been the necessity of limiting the comparison to a small sample. Therefore, the figures presented in this article do not permit a general comparison of North and South, but are restricted in their application to the communities (small cities) included in the sample.

An outstanding difficulty in making such a comparison is the fact that consumers in northern and southern cities do not have the same consumption habits even when their incomes are at the same level. As a result, it is advisable to compare expenditures in the several

[1] Prepared by the Cost of Living Division on the basis of prices collected by the Retail Price Division of the Bureau of Labor Statistics.

cities not for identical items of consumption but for items that maintain equivalent standards of living or levels of economic well-being.

Again, any statistical comparison of living costs, whether in the same community or in different types of communities, is necessarily limited to tangible and measurable items and cannot in the nature of things include such items as the degree of contentment, happiness, or personal satisfaction derived from the consumption of what is purchased. There are of course significant regional differences in the satisfaction and sense of well-being derived from the same items of consumption, but these differences are apparently becoming less important than formerly. It is apparent that largely because of the spread of the radio, the automobile, the motion picture, and the Nation-wide periodicals, regional differences in consumption have tended more and more to be eliminated from American life. The Consumer Purchases Study of the Bureau of Labor Statistics [2] shows that in all regions, as income increases there is the same advance towards a similar standard, evidence that the type of living regarded as desirable is much the same in both regions. For example, as income increases, expenditures for movies not only increase at the same rate in both the South and the North, but are approximately equal at each income level. Evidence with regard to a large number of other items of expenditures, all pointing toward a Nation-wide approach to the same standards, can be adduced from the results of the Consumer Purchases Study.

Cost of Customary Purchases

The cost of living in the 5 small southern cities surveyed, as shown by indexes that represent averages obtained from making two separate comparisons, one based upon northern consumption, the other based upon southern consumption, was found to be 3.1 percent lower on the average than in the 5 northern cities of the same size.[3] Food prices

[2] The Study of Consumer Purchases, in which the Bureau of Labor Statistics and the Bureau of Home Economics have cooperated with the National Resources Committee, the Central Statistical Board, and the Works Progress Administration, provides data on the average purchases of families in each occupational group in cities in different parts of the country for the year 1935–36.

[3] The survey covered the following 10 cities with populations ranging from 10,000 to 19,000 persons:

	Population		*Population*
Chillicothe, Ohio	18,340	Hattiesburg, Miss	18,601
Dover, N. H	13,573	Sherman, Tex	15,713
Hanover, Pa	11,805	Statesville, N. C	10,490
Holland, Mich	14,346	Sumter, S. C	11,780
Little Falls, N. Y	11,105	Thomasville, N. C	10,090

The importance of this size group in consideration of regional differences may be seen from the fact that in 1930, 14.7 percent of the urban population in the South Atlantic and South Central Divisions and 13.1 percent of those in the New England, Middle Atlantic, and North Central Divisions were living in cities of 10,000–25,000 population.

The cities covered are all industrial communities, and were selected to represent the types of production on which industry committees are likely to rule on wage rates during the coming year. They are independent communities, not satellites of a nearby larger city. They each have more than 1,000 wage earners employed in manufactures. No extreme changes in employment have occurred in them in recent years, and such changes as have occurred have been in line with changes in the entire region concerned. A relatively small proportion of the dwellings occupied by their wage earners are company owned.

were virtually the same, and lower housing and fuel costs in the 5 southern cities were partially offset by higher prices for clothing, furniture, furnishings and equipment, and miscellaneous items. It is of interest to note that the difference of 3.1 percent in living costs between the northern cities as a group and the southern cities as a group is smaller than the differences between some of the cities in the same region. The lowest as well as the highest cost in the 10 cities surveyed was found in the northern group. (See table 1.)

TABLE 1.—*Indexes of Living Costs of Wage Earners in 10 Small Cities, December 15, 1938*

[Average for the 10 cities=100.0]

Region and city	Indexes [1] of—						
	Total	Food [2]	Clothing	Housing	Fuel, light, and refrigeration	Furniture, furnishings, household equipment	Miscellaneous
Northern cities	101.6	99.9	99.0	103.9	120.6	98.1	98.5
Chillicothe	103.5	99.3	105.4	119.8	96.8	102.0	100.9
Dover	109.2	109.9	93.1	121.0	143.3	98.7	99.8
Hanover	94.6	96.4	89.5	86.2	112.2	97.8	93.7
Holland	96.7	94.5	105.0	82.6	119.8	92.5	98.3
Little Falls	103.9	99.3	102.0	110.1	130.7	99.5	99.6
Southern cities	98.4	100.1	101.0	96.0	79.4	101.8	101.5
Hattiesburg	97.9	99.3	102.9	83.7	78.5	107.9	106.2
Sherman	95.0	95.6	103.5	79.2	82.0	99.9	103.0
Statesville	102.0	102.2	106.4	102.1	88.7	104.0	103.6
Sumter	99.8	100.1	92.3	121.3	76.8	95.3	97.1
Thomasville	97.2	103.3	100.1	93.7	70.9	101.8	97.6

[1] The budgets used are based upon data from the Study of Consumer Purchases. Average purchases of wage earners in 9 New England and East North Central small cities were derived from the survey made by the U. S. Bureau of Labor Statistics. Average purchases of wage earners in the 4 southeastern small cities were supplied by the U. S. Bureau of Home Economics.

[2] Prices apply to Feb. 14, 1939.

The budgets used for the two regions are not hypothetical budgets prepared to reflect presumed typical habits. They are based upon actual purchasing habits of both northern and southern wage-earner families as determined by the Consumer Purchases Study. The northern budget is based upon average family consumption in small New England and North Central cities. The southern budget is based upon average family consumption in small South Atlantic cities. In addition, prices were collected in each of the 10 towns studied only on those items which retail dealers sold with some frequency. Items which were not generally sold by dealers in both regions were not included in the comparison. The quantities used are those actually consumed by wage-earner families; the prices used are those actually paid.

TREATMENT OF REGIONAL DIFFERENCES IN CONSUMPTION

Since the purpose of the inquiry was the comparison of expenditures required to secure the same level of economic well-being in the

10 cities, the chief problem which had to be met in the survey was that of defining equality of well-being. If northern and southern wage earners consumed the same goods and services in the same quantities, this would be a simple task. The same level of well-being in both regions would in that case be provided by the same quantities of the same goods and services. By pricing the individual items, the relative cost of living in the areas of comparison could be readily determined. This procedure has certain advantages and has with some modification been used in the past, notably in a study made by the Division of Social Research of the Works Progress Administration.[4]

This method, however, does not allow for differences in consumption habits. The Southerner, for example, prefers less bread and more hominy grits, less beef and more pork. Ideally, the best method of accounting for regional differences in consumption habits would involve drawing up separate budgets, based upon the consumption habits of the areas to be compared, and providing as nearly as possible for equivalent levels of well-being. In the case of food this might be accomplished fairly well by making the budgets equal in their nutritive value as measured in calories, vitamins, and minerals, although even this procedure might not assure that the budgets would be equal in terms of palatability, variety, and other nonphysical characteristics. For all other groups, with the exception of fuel, this method would be even more difficult because of the difficulty of defining equal standards of adequacy, as for instance, in the matter of clothing. Therefore, because of the difficulties involved in this method, the Bureau has not attempted to set up separate budgets, of equivalent adequacy, for the areas compared, but has attempted to reach the same objective by analyzing and allowing for the regional differences in habits of consumption. No item has been included in the comparison which is not purchased in both regions.

The differences in consumption between families at the same income level in the two regions covered may be ascribed to three causes, differences in climate, differences caused by the different price structures as distinguished from the general price levels, and finally differences caused by variations in tastes, in preferences, in community customs, and in other intangible factors. The warmer climate of the South permits the typical southern family to achieve certain substantial economies in its living. It requires, for example, considerably less fuel in the South than in the North to attain the same level of winter comfort. In the matter of housing, a southern family can dispense more easily with insulation and central heating. In the present study, such factors have been recognized and allowed for.

[4] See pp. 35–38 for results obtained by the use of this method.

Clothing requirements represent another group on which climate might be expected to have an effect. Overcoats, a necessity in the North, are not worn so extensively in the South. Wool fabrics are more important in the North than they are in the South. Nevertheless, differences in climate between North and South do not appear to result in lower clothing expenditures in the South.[5]

The effect of the warmer southern climate on the total requirements for food, furniture, furnishings and equipment, and miscellaneous items is also negligible. As a result, allowances such as those made for fuel and housing have not been made in the present study for other groups in the budget. The differences in types of clothing, food, furniture, and other items purchased in both regions, however, have been taken into consideration by the procedure explained below.

Much of the difference between northern and southern purchasing habits is associated with differences between the two regions in the prices of particular items as distinguished from the general price level. Those foods which bulk large in the southern diet, but are much less important in the North, are foods which have relatively low prices in the South but relatively high prices in the North. Similarly, foods which are staples of the northern diet but much less frequently consumed in the South, are relatively cheap in the North but expensive in the South.

This is true not only for food but for other groups of items in the budget. If the regional comparison were made solely on the basis of the northern budget (adjusted to allow for the effect of climate on housing and fuel requirements) the resulting figures on differences in living costs would be less than the actual differences found. If such a comparison showed costs to be 1 percent lower in the South (approximately the difference actually found by this kind of comparison for the cities covered by this study), the actual difference in living costs would be appreciably greater than that amount, for if the Southerner could purchase the northern budget for 1 percent less, he could effect certain

[5] The figures below illustrate this. Of course, price differences may affect the level of clothing expenditures in the three regions, but as this study shows, these differences are slight. The total actual clothing expenditures of families of white wage earners and clerical workers in cities in three regions, as shown by the Study of Money Disbursements of Wage Earners and Clerical Workers made by the Bureau of Labor Statistics and covering 1 year during the period 1934–36, are as follows:

Income class—	Annual expenditures in cities in—		
	Southern region	North Atlantic region	East North Central region
Under $900	$67	$73	$76
$900–$1,200	106	101	104
$1,200–$1,500	139	133	145
$1,500–$1,800	180	172	178
$1,800–$2,100	213	210	225
$2,100 and over	315	327	308

economies by substituting inexpensive southern items for those which are inexpensive in the North but relatively expensive in the South. If, conversely, the comparison were made on the basis of the southern budget (adjusted to allow for the effect of climate on housing and fuel requirements) and such a comparison showed a difference of 5 percent (approximately the difference shown by this kind of comparison for the 10 cities), the actual difference would be less than 5 percent; for if the Northerner could purchase the southern budget for 5 percent more, he could effect economies by the same type of substitutions of inexpensive northern items for items which were inexpensive in the South but expensive in the North. Therefore, the true difference would lie between 1 and 5 percent.

Following the above line of reasoning, neither the index derived by the use of the southern budget nor that derived by use of the northern budget truly represents the living-cost picture. A close approximation lies between the two. If this reasoning is carried through, the index of living costs for the southern cities, with costs in the northern cities equal to 100, should be less when southern weights are used than when northern weights are used. The results of the Bureau's present study show that this is true, not only for all items (94.7 when southern weights are used and 99.0 when northern weights are used) but for each group of items as well.

Reference to tables 2 and 3 show that the same conclusion is true for food, clothing, housing, fuel and light, furniture, furnishings and equipment, and miscellaneous items. In addition, table 4 shows that it is true for each subgroup of food (cereals, meats, etc.). This is convincing evidence that families do make substitutions and that many of the regional differences in consumption habits are associated with differences in the prices of particular items.

Since the nearest approximation to reality lies between the indexes obtained from the two separate comparisons, an average [6] of the two indexes has been used in this article. The method here described was followed by the International Labor Office in the even more difficult study of costs in Detroit as compared with costs in cities as different as Stockholm and Istanbul.[7]

Cost of the Budgets

The cost of the goods consumed by an average family of an employed wage earner in the North was found to be 1 percent less in the five southern than in the five northern cities, and in dollars, the cost was $1,387 in the northern cities and $1,374 in the southern cities (table 2). Southern wage-earner families on the average would have to spend

[6] As in the International Labor Office study, the geometric mean has been used as an average.

[7] International Labor Office, Series N, No. 17: "An International Enquiry into Costs of Living," Geneva, 1931

$13 a year less than northern wage earners to obtain an equivalent plane of living in these cities.

TABLE 2.—*Cost of Living of Wage Earners in 10 Small Cities, December 15, 1938, Based Upon Consumption in North*

[Average for the 10 cities=100.0]

Region and city	Total	Food [1]	Clothing	Housing	Fuel, light, and refrigeration	Furniture, furnishings, household equipment	Miscellaneous
	Indexes (weighted by customary wage-earner purchases in North [2])						
Northern cities	100.5	98.1	98.9	103.2	119.5	97.2	98.1
Chillicothe	103.1	99.0	105.1	119.2	96.5	101.7	100.2
Dover	107.9	107.3	93.0	120.7	142.3	97.0	99.7
Hanover	93.9	95.2	88.9	86.7	111.8	95.8	93.3
Holland	95.2	92.7	105.9	80.3	117.2	92.9	97.6
Little Falls	102.4	96.4	101.6	109.2	129.6	98.6	99.8
Southern cities	99.5	101.9	101.1	96.7	80.4	102.8	101.9
Hattiesburg	98.8	100.6	103.0	83.4	79.3	106.8	107.1
Sherman	95.8	96.0	104.0	80.5	83.2	101.7	103.4
Statesville	103.3	104.2	106.7	102.6	91.2	105.2	104.1
Sumter	101.3	102.6	92.2	122.2	76.8	98.1	97.6
Thomasville	98.4	106.0	99.8	94.8	71.7	102.1	97.1
	Money cost of customary wage-earner purchases in North [2]						
Average, all 10 cities	$1,380	$464	$126	$219	$98	$58	$415
Northern cities	1,387	456	125	226	117	56	407
Chillicothe	1,423	460	133	261	94	59	416
Dover	1,489	498	118	264	139	56	414
Hanover	1,296	442	112	190	110	55	387
Holland	1,314	431	134	176	115	53	405
Little Falls	1,413	448	128	239	127	57	414
Southern cities	1,374	473	128	212	79	59	423
Hattiesburg	1,364	467	130	183	78	62	444
Sherman	1,323	446	131	176	82	59	429
Statesville	1,426	484	135	225	89	61	432
Sumter	1,398	477	117	268	75	56	405
Thomasville	1,358	492	126	208	70	59	403

[1] Prices apply to February 14, 1939.

[2] As shown by the Study of Consumer Purchases made by the U. S. Bureau of Labor Statistics in small cities in New England and the East North Central region. Data represent the average purchases of families of white wage earners, including husband and wife both native born, not having been on relief at any time during the year covered by the survey.

On the other hand, the cost of goods consumed by an average family of an employed wage earner in the South was 5.3 percent less in the five southern cities than in the five northern cities. Incomes, and therefore family expenditures, were lower among wage earners in the South than in the North. The average purchases of a southern worker's family cost $1,075 in the five small southern cities covered in the present survey, and $1,136 in the five small northern cities.

TABLE 3.—*Cost of Living of Wage Earners in 10 Small Cities, December 15, 1938, Based Upon Consumption in South*

[Average for the 10 cities=100.0]

Region and city	Total	Food [1]	Clothing	Housing	Fuel, light, and refrigeration	Furniture, furnishings, household equipment	Miscellaneous
	Indexes (weighted by customary wage-earner purchases in South [2])						
Northern cities	102.7	101.7	99.1	104.7	121.7	99.0	98.8
Chillicothe	104.0	99.6	105.7	120.4	97.1	102.3	101.7
Dover	110.6	112.5	93.2	121.3	144.3	100.4	99.9
Hanover	95.4	97.7	90.1	85.8	112.7	99.8	94.0
Holland	98.3	96.3	104.1	85.0	122.4	92.1	99.1
Little Falls	105.4	102.2	102.5	111.0	131.8	100.4	99.4
Southern cities	97.3	98.4	101.0	95.3	78.4	100.8	101.2
Hattiesburg	97.1	98.0	102.9	84.0	77.8	109.1	105.3
Sherman	94.2	95.2	103.0	77.9	80.9	98.1	102.6
Statesville	100.8	100.3	106.1	101.6	86.2	102.7	103.1
Sumter	98.3	97.7	92.4	120.4	76.9	92.6	96.7
Thomasville	96.0	100.6	100.4	92.7	70.2	101.6	98.1
	Money cost of customary wage-earner purchases in South [2]						
Average, all 10 cities	$1,106	$356	$114	$173	$100	$52	$311
Northern cities	1,136	362	113	181	121	51	308
Chillicothe	1,149	354	120	208	97	53	317
Dover	1,223	400	106	210	144	52	311
Hanover	1,055	348	103	148	112	51	293
Holland	1,087	343	119	147	122	47	309
Little Falls	1,165	363	117	192	131	52	310
Southern cities	1,075	350	115	165	78	52	315
Hattiesburg	1,073	349	117	146	77	56	328
Sherman	1,041	339	117	135	80	51	319
Statesville	1,114	357	121	176	86	53	321
Sumter	1,087	348	105	208	77	48	301
Thomasville	1,061	358	114	161	70	52	306

[1] Prices apply to February 14, 1939.

[2] As shown by the Study of Consumer Purchases in the Southeast. Data applying to families of white and Negro wage earners, including husband and wife both native-born, not having been on relief at any time during the year were supplied by the U. S. Bureau of Home Economics. Averages representing purchases of white and Negro families were combined by weights representing the proportion of white and Negro families in cities of this size in the Southeastern and South Central regions and in Texas, as shown by the census of 1930.

COST OF FOOD

The difference between the two sets of food-cost indexes, based on the two different sets of consumption habits, reflects the interrelationship between such habits, production, and prices in each particular region. Thus, it would cost 3.9 percent more in the South than in the North to buy the types of food that constitute an average wage-earner diet in the North. Conversely, it would cost 3.2 percent less in the South than in the North to buy the types of food that constitute an average wage-earner diet in the South. Essentially, therefore, no general difference is indicated by the data from these 10 cities in the cost of food as between the two regions.

Average food costs were computed on the basis of prices for 89 foods for February 14, 1939. Each item for which a price was collected in this, as in the other commodity and service groups, was described by a clearly defined specification. Such specifications are used in order to obtain articles which are as nearly comparable as possible between cities. When such prices were combined with weights representing average food consumption of northern wage earners in small cities,[8] costs in the South were found to be 3.9 percent higher than in the North.

This difference was not uniform for different groups of food, however. Southern costs were considerably higher for certain food groups, as for example, cereals and bakery products, and dairy products and eggs; but were the same for others, as for example, sugar, sweets, and salt. The first section of table 4 presents indexes of the cost of each food group, based upon northern consumption. By far the largest regional difference was for bakery products, costs of which were 17.4 percent higher in the South. This was due chiefly to the differences in the price of white bread, which varied from 6.3 to 8.2 cents in the northern cities, but from 8.3 to 9.8 cents in the southern cities. The lowest average bread price in any of the southern cities (Hattiesburg) was higher than the highest average bread price in one of the northern cities (Hanover). The second group most important in producing the higher southern food costs consisted of dairy products and eggs. In this case, the difference was caused by higher southern prices for fresh and evaporated milk and for butter, although the difference was partially offset by lower southern egg prices. Southern meat prices were reported as lower than northern for beef, pork, and poultry. It is possible, however, that at least part of the difference in meat prices was a quality rather than a price difference, since variations in local trade practices and in nomenclature do not permit rigid conformity to specifications in securing prices. All the other food groups showed higher southern costs, but except for fruits and vegetables they formed a relatively small share of the average food expenditures of northern wage earners' families.

On the basis of southern wage earners' consumption, however, the relation between food costs in the two regions appeared in a different light; costs in the 5 southern cities were 3.2 percent lower than in the 5 northern communities studied. As shown by the second section of table 4, the average index for the 5 southern cities was less for each of the food groups when computed on the basis of southern consumption as compared with indexes computed on the basis of northern consumption. The food group exhibiting the largest shift in regional differences

[8] Weights for each of the 89 foods were calculated from the detailed figures on the actual food consumption of both northern and southern wage earners according to the method described in the Monthly Labor Review, September 1935: Revision of Index of Cost of Goods Purchased by Wage Earners and Lower-Salaried Workers.

was that including cereals and bakery products. With the prices weighted on the basis of northern consumption, southern costs for this group were 17.4 percent higher. On the basis of southern consumption, they were 2.4 percent lower. Bakery bread is much less important in the consumption of southern families than it is in the North, and the average price in the 5 southern cities was 8.8 percent higher than in the 5 northern cities. On the other hand, wheat flour which bulks large in the purchases of southern families exhibited only a slight regional price difference, whereas corn meal, a southern staple, cost only half as much in the southern cities as in those in the North.

TABLE 4.—*Indexes of Food Costs of Wage Earners in 10 Small Cities, February 14, 1939*

[Average for the 10 cities=100.0]

City	Total	Cereals and bakery products	Meats	Dairy products and eggs	Fruits and vegetables	Beverages and chocolate	Fats and oils	Sugar, sweets, and salt
	Weighted by customary wage-earner purchases in North [1]							
Northern cities	98.1	92.0	104.2	96.3	97.9	98.9	94.5	99.5
Chillicothe	99.0	91.8	105.6	97.0	99.4	94.8	91.5	106.1
Dover	107.3	96.9	116.9	104.0	109.2	105.7	103.6	101.3
Hanover	95.2	96.5	100.8	96.7	89.1	94.6	88.8	92.1
Holland	92.7	85.0	100.2	87.0	93.2	93.4	94.8	102.2
Little Falls	96.4	89.7	97.6	96.6	98.5	106.1	93.6	96.0
Southern cities	101.9	108.0	95.8	103 7	102.1	101.1	105.5	100.5
Hattiesburg	100.6	103.7	94.8	99.3	104.6	106.9	103.2	98.9
Sherman	96.0	98.5	96.2	88.2	97.7	117.1	100.4	96.5
Statesville	104.2	111.5	95.3	111.5	102.1	99.2	107.6	103.2
Sumter	102.6	110.8	97.1	104.2	102.9	93.6	103.7	99.5
Thomasville	106.0	115.6	95.5	115.5	103.1	88.6	112.7	104.2
	Weighted by customary wage-earner purchases in South [1]							
Northern cities	101.7	101.2	105.9	97.3	102.7	99.6	95.2	100.0
Chillicothe	99.6	90.6	105.1	98.0	103.2	94.7	90.2	106.1
Dover	112.5	121.3	113.4	106.7	116.1	106.7	101.5	103.1
Hanover	97.7	95.6	103.6	95.5	94.9	95.7	91.1	94.4
Holland	96.3	92.5	103.0	88.4	95.9	93.1	99.2	99.9
Little Falls	102.2	105.8	104.3	97.8	103.2	107.7	93.8	96.6
Southern cities	98.4	98.8	94.1	102.7	97.3	100.4	104.8	100.0
Hattiesburg	98.0	100.6	93.7	99.1	98.7	106.2	100.5	98.7
Sherman	95.2	98.4	96.5	86.5	92.0	117.4	101.9	97.6
Statesville	100.3	97.4	95.5	110.1	98.1	98.6	107.9	102.0
Sumter	97.7	97.5	92.8	104.1	98.2	93.3	103.0	99.1
Thomasville	100.6	100.2	92.2	113.8	99.6	86.7	110.9	102.4

[1] As shown by the Study of Consumer Purchases. See footnote 2, table 3.

The higher southern consumption of corn meal, hominy, sweetpotatoes, turnip greens, wheat flour, pork products and poultry, and the lower consumption of baker's bread, beef, veal, lamb, and milk are regional characteristics of long standing. Professor Vance of the University of North Carolina has summarized the history of dietary habits in the South, in part, as follows:

> In the main, the early American settler brought with him the food habits of the English common man, including a great, if often unsatisfied, fondness for meats. * * * The frontier, because of its paucity of resources, stripped this diet of

whatever variety it possessed and added corn to take the place held by wheat. * * * Hogs thrive on corn, and complete their growth in one season. It has been estimated that 24 percent of the energy of grain consumed is recovered for human consumption in pork, as compared with about 18 percent in milk, and 3.5 percent in beef or mutton. * * * The heritage growing out of geographic adjustments has so conditioned food likes and dislikes that it determines both the growth and purchases of foods.[9]

COST OF HOUSING

Expenditures for housing stand next in importance to those for food in the spending of the average wage earner's family. In the present survey, the variation in costs among the 5 cities covered within each region was most marked for housing. For both North and South, the highest-rent city was approximately 50 percent higher than the lowest-rent city. Local influences on housing costs, e. g., population growth, construction activity, flow of income, are apparently more important for this group than are factors which are region-wide in their influence.

Rents for company houses were not included in the survey of cities in either region, because of the provision of the Fair Labor Standards Act that the wages required by the act may include "the reasonable cost, as determined by the Administrator, to the employer of furnishing such employee with board, lodging, or other facilities." No attempt was made to obtain rents for houses of the same type of construction in the northern and southern cities, as differences in construction are naturally associated with the differences in climate of the two areas. For the same reason, houses with gas room heaters in the southern cities were treated as providing the same level of living as houses with furnaces in the northern cities.

A sample of from 200 to 300 rents in each city was taken at random [10] from among dwellings with 4, 5, or 6 rooms possessing, as a minimum, electric lights, inside cold running water and inside flush toilets, and renting for less than $40 a month. In addition, all dwellings for which rents were included in the sample were required to be in at least a fair state of repair and conform to the local housing code.

In order to make possible intercity comparisons based upon rents of houses of approximately the same quality, costs were calculated on the basis of houses of the same age, with the same number of rooms, and possessing the same number of facilities. The final indexes of the cost of rents were obtained from two groups of dwellings: houses without garage included in rent, and houses with garage included in

[9] Vance, Rupert B.: Human Geography of the South (pp. 415-417). Chapel Hill, University of North Carolina Press, 1932.

[10] A list of the rented dwellings in each city was prepared, the dwellings were numbered, and those from which rents were to be secured were chosen by means of random numbers. (See Tippett: L. H. C. Random Sampling Numbers, London, Cambridge University Press, 1927.)

rent.[11] Within these two groups, dwellings were sorted by number of rooms; then by age, separating those built before 1900, from 1900 to 1920, and after 1920; and finally by their possession of the appropriate number—0, 1, 2, 3, or 4—of the following facilities: Running hot water; bathroom; gas or electricity for cooking; and central furnace, or gas heaters (in the South). Since construction of house was not one of the variables held constant, this procedure had the effect of comparing houses with less expensive construction in the South with more expensive houses in the North. These successive sorts gave 90 possible groups in each city. Average rents were calculated for each group, and average rents for each city were calculated by weighting the group averages represented in that city. The weights used were as follows: For the rent indexes for the types of dwellings customarily occupied by northern wage earners, the weights represented the relative importance of each group in the five cities covered in the North in the present survey. For the rent indexes for the types of dwellings customarily occupied by southern wage earners, the weights used represented the relative importance of each group in the five cities in the South.[12] The indexes thus obtained were applied to the average housing expense of northern and southern wage earners, as shown by the Consumer Purchases Study.

The classification used by no means exhausts those factors which exert an effect upon rent, as, for example, square feet of floor space, and character of the neighborhood in which the unit is located, but it was not practicable in the present survey [13] to take into account all these factors.

Rent differences between cities in the same region persisted for all types of houses compared. Thus, in the South, Sumter had higher rents for almost every type of house than did the other four cities covered in the South; and similarly in the North, Holland was the lowest-rent town for virtually every dwelling group.

COST OF FUEL, LIGHT, AND REFRIGERATION

The greatest percentage difference between costs in the five northern and the five southern cities occurred in the case of fuel. The difference was so extreme that its influence on differences in total living costs was greater than that of housing, even though it took a

[11] Apartments with heat or heating of water included in rent occurred infrequently. About 10 percent of the dwellings priced in the North and a few priced in the South were rented on this basis. They were omitted from the analysis because of the difficulty of making the adjustments in the fuel allowances which would have been necessary if they had been included.

[12] The weights were based on data from the rent survey rather than from the Consumer Purchases Study, since age data were not collected in the latter study. The rent survey, being based on more than 1,000 dwelling units in each of the regions, furnished as reliable a basis as the Consumer Purchases Study for this purpose.

[13] For a somewhat similar procedure employed for the analysis of international differences in rental costs see: International Labor Office (Geneva), International Comparisons of Cost of Living, Part II—International Comparison of Rents, by R. Guye. Studies and Reports of the International Labor Office, Series N, No. 20, 1934.

smaller proportion of total family expenditures.[14] The regional differences in costs for this group of items, shown in tables 1 to 5, were due almost entirely to the fact that the wage earners in the small southern cities included in the Consumer Purchases Study purchased fuel providing only half as many thermal units as that purchased by the wage earners covered in the investigation in small cities in the North.[15] Bituminous-coal prices for the lump size varied from $8.31 in Thomasville to $9 in Statesville and Sumter and from $5.95 in Chillicothe (in the heart of the eastern high-volatile bituminous region) to $10.24 in Dover for coal of this same size. In Sherman and Hattiesburg, exceptionally low natural-gas prices have virtually eliminated coal as a domestic fuel. The comparatively low price of gas in Chillicothe combined with low bituminous-coal prices resulted in relatively low fuel costs as compared with other cities in the same climate. The cost of electric current was somewhat higher in the five southern cities than in those in the North. The price varied from 4 to 8 cents per kilowatt-hour in the five northern cities, and from 5 to 9 cents in the southern cities. The number of kilowatt-hours representing customary consumption by northern small-city wage earners was somewhat larger than that consumed on the average by southern workers in cities of the same size. The slightly higher cost of electricity in the South thus had the effect of somewhat decreasing the North-South difference when it was calculated in terms of the purchases of the northern wage earners.

COST OF CLOTHING

Clothing costs for each city were calculated on the basis of prices of 55 different articles, again weighted by two different sets of consumption figures. On the basis of northern consumption, costs in the five southern cities were 2.2 percent higher, and on the basis of southern consumption, they were 1.9 percent higher. Differences in costs as between cities were considerably larger than were the interregional differences. In the South, the highest-cost city was about 15 percent higher than the lowest-cost city, while in the North the highest was about 18 percent above the lowest. Although the total clothing indexes showed little regional variation, prices for certain articles showed marked variation between regions. For the individual articles of clothing, however, variation in prices as between cities was more marked than variation between regions. The greater distance of the southern towns from centers of clothing manufacture probably affects southern prices, although transportation costs, because of the

[14] On the average, expenditures for fuel, light, and refrigeration combined took about 8 percent of the family expenditures of the wage-earner families in the small cities in the North and the South covered in the Consumer Purchases Study.

[15] Costs were calculated in terms of the fuels customarily used in each city, as shown by the present survey. In computing costs, account was taken of the B. t. u. content of each type of fuel, and its relative efficiency in domestic use.

high unit value of clothing, can form only a small part of the total retail price.

COST OF FURNITURE, FURNISHINGS, AND EQUIPMENT

Differences in the cost of furniture, furnishings, and household equipment, based on prices of 16 different articles of basic equipment, were of about the same magnitude as those for clothing. The differences were more dependent on the budget used, however, than was the case for clothing. On the basis of northern consumption, costs in the five southern cities were 5.8 percent higher; on the basis of southern consumption they were only 1.8 percent higher. The difference between the two sets of indexes was caused chiefly by the interaction between consumption and prices of electrical equipment, mainly vacuum cleaners, washing machines, and electric refrigerators. Northern consumption of this type of equipment is considerably higher than it is in the South, but southern prices, possibly because of the lower consumption, are higher than those in the North.

COST OF MISCELLANEOUS ITEMS

The cost of miscellaneous items was slightly higher in the five southern cities—3.9 percent higher using northern consumption, and 2.4 percent higher using southern consumption. This group includes items of medical care, automobile expense, personal care, and household operation. Constant allowances were made to take care of customary expenditures for community welfare, education, and gifts, which averaged $60 among northern workers and $42 among southern workers.

Although these categories of expenditure are, strictly speaking, outside the market process in the sense that they are not expenditures for definite goods and services, they do form part of the total cost of living of the average wage earner's family and were included for that reason. The items exhibiting the most marked variation between regions were cigarettes and automobile expense. Automobile expense plays an important part in the expenditure pattern of wage earners at relatively low-income levels. Thirty-nine percent of all the southern small-city wage earners and 58 percent of the northern small-city wage earners, covered in the Consumer Purchases Study, reported ownership of automobiles. Automobile prices are definitely higher in the South because of the greater distance from production centers, and cigarette prices are higher because of taxes imposed in several Southern States.

Cost of a Maintenance Budget—36 Cities

Reference has been made, at the beginning of this article, to the study made by the Works Progress Administration on the basis of a hypothetical budget. This budget, to be priced in all cities, was

prepared early in 1935 to include all the goods and services which it was estimated are necessary to meet the "normal or average minimum requirements" of a family of four—a moderately active man, a moderately active woman, a boy aged 13, and a girl aged 8. The Division of Social Research describes this budget as follows:

> The maintenance budget is not so liberal as that for a "health and decency" level which the skilled worker may hope to obtain, but it affords more than a "minimum of subsistence" living.
>
> It does not approach the content of what may be considered a satisfactory American standard of living, nor does its cost measure what families in this country would have to spend to secure "the abundant life." Such a standard would include an automobile, better housing and equipment, a more varied diet, and preventive medical care. Provision would be made for future education of the children and for economic security through saving. These and other desirable improvements above a maintenance level of living would necessitate annual expenditures considerably in excess of the money values of the budgets used in this investigation.[16]

This budget was priced as of March 1935, under the supervision of the Bureau of Labor Statistics, in 59 cities in different parts of the United States. Forty-nine of these cities are located in the Atlantic and Central States. According to the results of this investigation, when size of city is disregarded, costs in 20 cities in the South Atlantic and South Central States averaged 5.1 percent lower than in 29 cities in the North Atlantic and North Central States.

The cost of this budget has been calculated as of December 1938 for 36 cities in the eastern and central regions, 26 of those included in the original investigation and also covered in the Bureau's quarterly studies of changes in living costs, and in addition the 10 small cities recently surveyed at the request of the Wage and Hour Division.

The results of these calculations showed the average cost of this maintenance budget to be as follows as of December 1938 (again disregarding size of city):

North Atlantic States	$1,340
North Central States	1,343
South Atlantic States	1,325
South Central States	1,243

On the basis of the estimates for all 36 cities, southern costs were 3.9 percent below those in northern cities. For all 36 cities, the only items for which substantial differences in costs appeared were fuel, light, and refrigeration, and housing—20.4 and 8.2 percent, respectively. For all 36 cities food and furniture, furnishings and equipment were higher in the South, by 1.0 and 1.8 percent. Clothing costs were lower by 1.6 percent, and those for miscellaneous items by 3.1 percent.

Different techniques were used in calculating the current cost of different sections of the budget. The food-cost budget was entirely

[16] Works Progress Administration Monograph XII: Intercity Differences in Costs of Living, March 1935, 59 Cities, p. xiv.

recomputed in terms of prices as of February 14, 1939. The food allowance of the maintenance budget was based on the "adequate diet at minimum cost" of the United States Bureau of Home Economics. The cost of that budget was computed for 26 large cities by means of prices of the 89 foods regularly priced by the Bureau of Labor Statistics for its indexes of changes in food costs from time to time and for the 10 small cities just surveyed. The average cost of the foods specified in this budget was almost exactly the same in the northern and the southern cities covered by this comparison. The North-South difference amounted to less than 1 percent. It was not possible, however, to recompute the rent indexes for the 26 large cities without a prohibitive amount of work. Consequently, average rents in each of the 26 cities were estimated by applying the Bureau's time-to-time indexes of rental costs to the Works Progress Administration's figures for March 1935. Comparable figures for the 10 cities just surveyed were obtained by computing the average rent of dwelling units in all these cities and applying to this average the index for each of the 10 cities, obtained by use of weights representing the types of housing found in all the 10 cities combined.

Indexes of intercity differences of clothing costs and of furniture and housefurnishings costs were computed on the basis of prices of 55 articles of clothing, 16 articles of furniture and furnishings, and 37 miscellaneous items on December 15, 1938, weighted by the quantities provided in the Works Progress Administration budget. These indexes were applied to average costs calculated for these three groups of items in the 26 large cities as of December 15, 1938, by taking the costs computed for each city in March 1935 and the indexes of changes in costs from time to time, regularly computed by the Bureau of Labor Statistics.

As in the case of the calculations of the cost of the customary purchases of wage earners in the 10 small cities, costs of the maintenance budget differed more between cities in the same region than on the average between regions.

Variations in Living Costs, by Size of City

Although the present article is concerned primarily with regional differences in living costs, it is worth while to ask whether the data obtained from the 36 cities can be summarized to cast some additional light upon the effect of size of city on living costs.

Table 5 presents for each of the 36 cities for which the data are available the dollar-cost figures. An analysis of the figures will indicate why no final conclusions can be drawn from these data as to differences in costs which are related to size of city. The wide variations among cities in the same size class, and the extremely small number of

cases in some of the classes, make generalizations from these data as to size of city differences in living costs extremely doubtful.

TABLE 5.—*Living Costs in 36 Cities in the Eastern and Central States, December 15, 1938*

[Based on the plane of living specified in the WPA budget for a manual worker's family of 4, at the maintenance level]

City, section, and size	All items	Food [1]	Clothing	Housing	Fuel, light, and refrigeration	Furniture, furnishings, household equipment	Miscellaneous
Average: All 36 cities	$1,318.12	$462.30	$159.40	$252.12	$106.36	$32.67	$305.27
20 northern cities	1,341.52	460.33	160.51	261.70	116.99	32.41	309.58
16 southern cities	1,288.84	464.76	158.00	240.13	93.08	32.99	299.88
Over 5,000,000 population							
Northern cities:							
Chicago	1,450.05	462.22	159.11	292.61	137.36	31.32	367.43
New York	1,493.69	509.58	164.74	308.54	119.40	34.94	356.49
500,000–5,000,000 population							
Northern cities:							
Boston	1,421.88	479.30	168.47	260.19	133.25	33.05	347.62
Buffalo	1,304.30	461.98	168.95	241.12	107.25	32.32	292.68
Cleveland	1,386.18	456.32	175.93	284.52	100.76	32.59	336.06
Detroit	1,426.74	454.65	168.78	310.41	114.65	31.94	346.31
Philadelphia	1,336.41	471.03	171.62	254.57	104.42	32.52	302.25
Pittsburgh	1,352.16	459.01	166.43	284.91	88.32	34.43	319.06
St. Louis	1,387.38	479.17	159.80	285.15	108.68	37.25	317.33
Southern cities:							
Baltimore	1,334.95	480.74	165.42	247.85	104.22	34.98	301.74
Washington, D. C.[2]	1,490.31	484.57	170.53	353.29	116.02	35.66	330.24
250,000–500,000 population							
Northern cities:							
Cincinnati	1,322.18	437.84	175.59	272.57	92.96	35.46	307.76
Indianapolis	1,279.60	442.47	157.88	238.16	94.06	32.03	315.00
Kansas City	1,268.65	466.53	171.24	209.84	102.72	32.85	285.47
Minneapolis	1,415.69	477.69	159.46	303.67	139.84	31.87	303.16
Southern cities:							
Atlanta	1,332.28	476.02	158.29	286.90	88.27	30.56	292.24
Birmingham	1,277.14	465.56	169.21	226.42	78.31	32.79	304.85
Houston	1,298.83	447.74	156.14	244.13	88.47	35.10	327.25
Memphis	1,306.13	447.14	171.45	262.50	82.35	35.27	307.42
New Orleans	1,261.09	457.77	160.81	204.09	75.24	36.69	326.49
25,000–250,000 population							
Northern cities:							
Portland, Maine	1,334.60	489.99	161.85	201.11	139.50	32.71	309.44
Scranton	1,364.71	479.88	160.75	267.88	97.40	31.56	327.24
Southern cities:							
Jacksonville	1,283.50	478.53	147.55	218.48	98.28	32.55	308.11
Mobile	1,183.90	466.89	155.14	175.30	80.29	33.98	272.30
Norfolk	1,325.30	477.13	166.98	245.78	98.50	33.78	303.13
Richmond	1,331.53	451.12	165.27	251.90	104.61	34.56	324.07
10,000–25,000 population							
Northern cities:							
Chillicothe	1,308.66	441.74	153.06	281.28	106.13	32.00	294.45
Dover	1,340.61	468.05	136.34	284.04	166.90	30.54	254.74
Hanover	1,151.04	431.13	130,88	201.72	113.58	30.05	243.68
Holland	1,183.50	409.66	153.36	193.32	128.79	27.77	270.60
Little Falls	1,302.49	428.38	146.04	258.48	143.87	30.93	294.79
Southern cities:							
Hattiesburg	1,205.28	449.02	150.58	196.56	71.56	32.79	304.77
Sherman	1,167.08	424.79	151.87	186.48	84.68	29.28	289.98
Statesville	1,315.20	478.87	154.52	236.64	121.88	31.33	291.96
Sumter	1,263.90	462.38	137.57	285.24	91.80	29.42	257.49
Thomasville	1,245.27	487.97	146.73	220.56	104.74	29.16	256.11

[1] Prices apply to Feb. 14, 1939, for all cities except Kansas City, Minneapolis, and St. Louis, for which food costs were computed as of Dec. 13, 1938.

[2] On the basis of 1930 population.

MAN-HOUR OUTPUT AND EMPLOYMENT IN PETROLEUM AND NATURAL-GAS PRODUCTION [1]

Summary

THE history of the petroleum and natural-gas industry presents an almost unbroken record of successive economies in unit labor requirements. By far the most spectacular reduction in manpower requirements has occurred in the primary production branch [2] of the industry which, between 1889 and 1935, showed an increase of more than 850 percent in output per man per hour. In petroleum refining, output per man also advanced substantially and in 1937 the throughput (i. e., the amount run to stills) of crude oil per man-hour was more than three times as great as in 1919. Comparable records for pipe-line transportation can be extended back only to 1922, but even within this short span of years the volume of crude petroleum and petroleum products handled per wage earner employed has increased approximately one-third.

Much the same tendency has been a conspicuous feature in virtually all other mineral industries, particularly since the World War. But the increasing output per worker in the petroleum and natural-gas industry stands out significantly because, although now ranking second among the mineral industries as an employer of labor, the process of producing oil and gas has always required a relatively small supply of labor per unit of product. It is also notable that the major increases in productivity in the petroleum and natural-gas industry have occurred since 1929.

During the period 1909-19 employment at oil and gas wells and at natural-gasoline plants increased faster than production. The same was true of petroleum refining. In the decade ended with 1929, however, there was an important change. Although employment continued to increase in primary production activities, the rate of increase was notably behind the growth of output. Petroleum refining showed similar development, except that the expansion of employment opportunities was even more markedly retarded than in oil, natural gas, and natural-gasoline production.

[1] This article is based upon a preliminary copy of ch. II of a larger report entitled "Technology, Employment, and Output per Man in Petroleum and Natural-Gas Production," prepared by O. E. Kiessling, H. O. Rogers, and others as one of the studies of the WPA National Research Project, in cooperation with the U. S. Bureau of Mines.

The chapter here summarized was prepared by H. O. Rogers, economic analyst, Bureau of Labor Statistics; N. Yaworski, mineral economist, National Research Project; G. R. Hopkins, assistant chief economist, Petroleum Economics Division, Bureau of Mines; and O. E. Kiessling, chief economist, Mineral Production and Economics Division, Bureau of Mines. R. L. Kiessling and J. J. Osserman conducted the extensive researches, under the supervision of N. Yaworski, that produced most of the new statistical material used in the chapter.

[2] I. e., oil and gas wells and natural-gasoline extraction plants.

After 1929 the lag in the employment trend compared with production was even more accentuated than in the preceding 10 years. The upward movement of both employment and output was arrested with the depression, and from 1929 to 1932 both trends generally were downward. Since 1932, production has not only recovered the depression losses, but new high records have been established in most branches of the industry. The number of wage earners employed in primary production, on the other hand, is still notably below the predepression high. In petroleum refining the number of wage earners employed in 1937 was the greatest on record, but employment in that year was still at a relative disadvantage in comparison with the level of output. If man-hours were used instead of wage earners as a gage of employment (see fig. 2), the drop in employment after 1929, in comparison with production, would appear even more precipitous because of the general shortening of the workday and the workweek in the past 6 years.

The corollary of increasingly divergent trends in production and employment since the World War is to be found in the curves of rising output per man-hour for the major divisions of the industry. Although the general tendency of output per man has been upward from the earliest record, increases in the physical volume of production during the early years of the industry either kept pace with or exceeded the gain in output per worker; thus employment approximately kept abreast with or even gained over production. Since the World War, however, the growth of demand has failed to offset important declines in unit labor requirements. The result has been that total manpower requirements of the industry have not increased at a rate commensurate with the rise in production. After 1929, moreover, output per man in primary production and in refining continued to grow at an accelerated rate. Both these developments were important factors in the shrinkage of employment opportunities in the industry during the depression period. Future trends in output per man, furthermore, will be important factors in determining the amount of employment that the industry provides.

Over an extended period many things have happened that have tended to raise the productive efficiency of individual workers employed in the oil and gas industry. One important influence has been an increase in the average permissible working age for minors, resulting in the elimination of many young boys from the labor force. Reduced length of the workday and workweek has likewise been a distinct aid to efficiency, as has generally better knowledge regarding the incidence of industrial fatigue and methods of ameliorating such fatigue. Output per worker has been increased, furthermore, by a safer and healthier environment in which to work and by general improvements in living conditions.

Although the cumulative effect of such changes has given the industry an older, stronger, healthier, and more experienced working force, the combined influences of factors that affect the welfare of individual workers can account for only a small fraction of the enormous increase that has taken place in output per man. The overshadowing reasons why the trend in output per man has outstripped both production and employment have been the success of the industry in finding and migrating to new flush-production areas and the brilliant achievements of petroleum and natural-gas technologists that have enabled the capture of a larger portion of the recoverable content of oil and gas reservoirs with a lessening unit outlay of human labor.

Growth of Production

A notable feature of the petroleum and natural-gas industry is the rapidity with which it has risen to a place of great importance in our national economy. From the commercial beginning of each division of the industry down to the time of the great depression, production showed an almost uninterrupted increase. The rate of growth, moreover, was rapid, and the period of greatest expansion was the post-war decade, when the growth of production of other minerals was slowing down. During this period, output in all branches of the petroleum and natural-gas industry more than doubled (see chart 1 and table 1). Even the depression served only as a temporary check. In 1937, with the exception of natural-gasoline extraction, production exceeded all previous records in each of the major divisions of the industry.

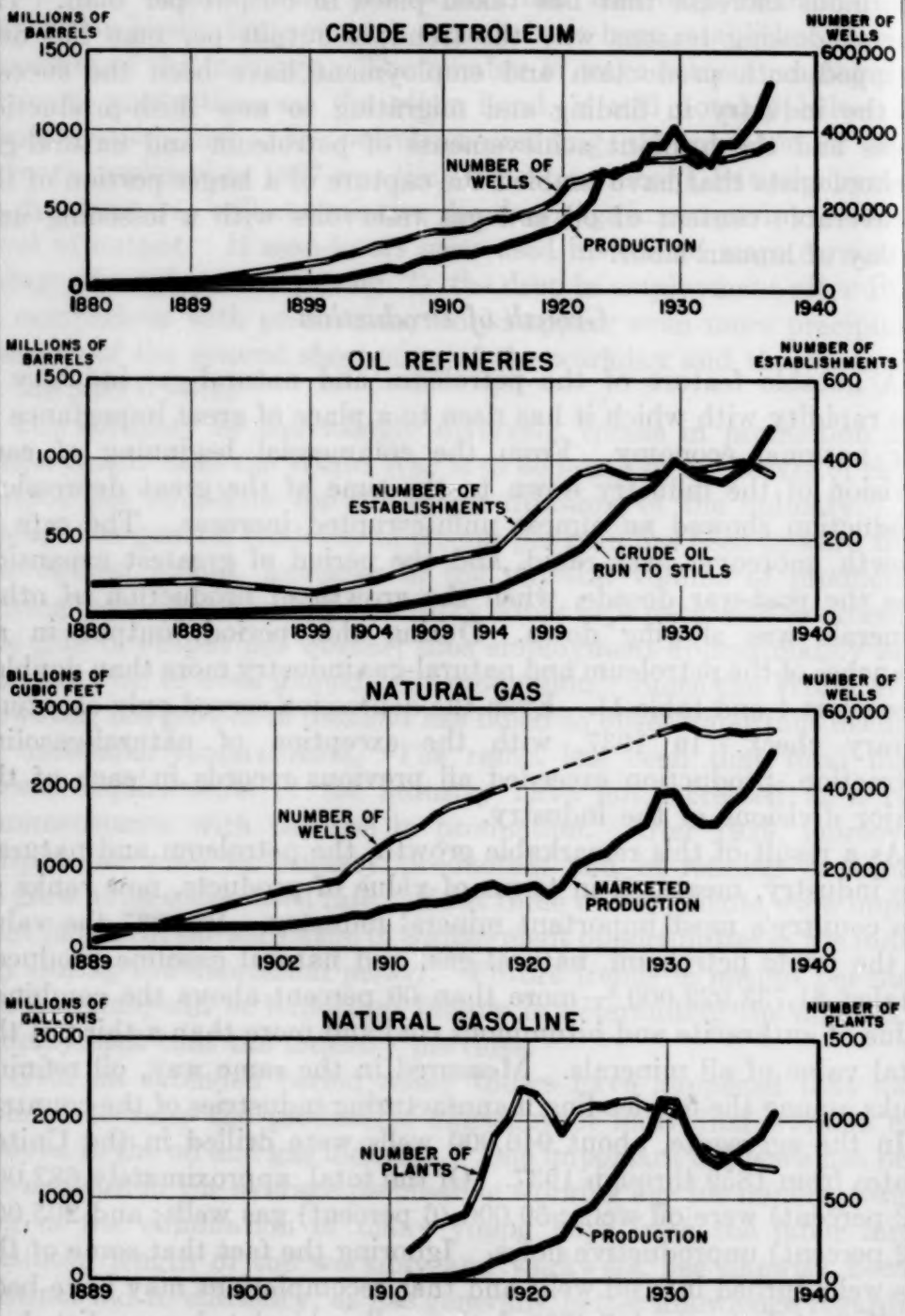
As a result of this remarkable growth, the petroleum and natural-gas industry, measured in terms of value of products, now ranks as the country's most important mineral industry. In 1937 the value of the crude petroleum, natural gas, and natural gasoline produced totaled $1,733,922,000 [3]—more than 60 percent above the combined value of anthracite and bituminous coal and more than a third of the total value of all minerals. Measured in the same way, oil refining ranks among the five leading manufacturing industries of the country.

In the aggregate, about 946,000 wells were drilled in the United States from 1859 through 1937. Of the total, approximately 682,000 (72 percent) were oil wells; 59,000 (6 percent) gas wells; and 205,000 (22 percent) unproductive holes. Ignoring the fact that some of the gas wells turned into oil wells and that recompletions may have been duplicated in part, 417,470 of the wells completed were listed as producers of oil or gas on December 31, 1937.

[3] Revised data representing the value of oil and gas at wells and of natural gasoline at extraction plants. This is much smaller than value at points of consumption that is frequently used, especially for natural gas.

CHART I.

PRODUCTION IN THE PETROLEUM AND NATURAL-GAS INDUSTRY



UNITED STATES BUREAU OF LABOR STATISTICS

SOURCE: MINERAL TECHNOLOGY AND OUTPUT PER MAN STUDIES WPA-NATIONAL RESEARCH PROJECT

TABLE 1.—*Long-Time Trends of Production in the Petroleum and Natural-Gas Industry 1880–1937*

Year	Crude petroleum		Natural gas		Oil refineries		Natural gasoline	
	Number of wells at end of year	Production (thousands of barrels)	Number of wells at end of year	Marketed production (millions of cubic feet)	Number of plants	Crude oil run to stills (thousands of barrels)	Number of plants	Production (thousands of gallons)
1880	18,634	26,286	[1]	[1]	86	17,417	[1]	[1]
1889	21,833	35,164	2,247	250,000	94	30,663	[1]	[1]
1899	69,673	57,071	[1]	[1]	67	52,011	[1]	[1]
1900	78,745	63,621	[1]	[1]	[1]	[1]	[1]	[1]
1901	85,111	69,389	[1]	[1]	[1]	[1]	[1]	[1]
1902	92,371	88,767	14,556	281,000	[1]	[1]	[1]	[1]
1903	101,182	100,461	[1]	[1]	[1]	[1]	[1]	[1]
1904	110,928	117,081	[1]	[1]	98	66,983	[1]	[1]
1905	115,943	134,717	[1]	[1]	[1]	[1]	[1]	[1]
1906	122,590	126,494	17,226	388,843	[1]	[1]	[1]	[1]
1907	133,040	166,095	20,468	406,622	[1]	[1]	[1]	[1]
1908	141,453	178,527	22,709	402,141	[1]	[1]	[1]	[1]
1909	146,736	183,171	24,734	480,706	147	120,775	[1]	[1]
1910	418,619	209,557	27,305	509,155	[1]	[1]	[1]	[1]
1911	150,793	220,449	28,978	512,993	[1]	[1]	176	7,426
1912	155,046	222,935	30,905	562,203	[1]	[1]	250	12,081
1913	170,774	248,446	33,345	581,898	[1]	[1]	341	24,061
1914	180,177	265,763	35,291	591,867	176	191,263	386	42,653
1915	181,317	281,104	36,546	628,579	[1]	[1]	414	65,365
1916	192,108	300,767	37,997	753,170	[1]	[1]	596	103,493
1917	199,319	335,316	39,283	795,110	[1]	[1]	886	217,884
1918	207,815	355,928	40,369	721,001	[1]	[1]	1,004	282,536
1919	228,084	378,367	[1]	745,916	320	365,272	1,191	351,535
1920	268,247	442,929	[1]	798,210	[1]	[1]	1,154	384,744
1921	274,500	472,183	[1]	662,052	366	443,363	1,058	449,934
1922	284,880	557,531	[1]	762,546	[1]	[1]	917	505,832
1923	290,100	732,407	[1]	1,006,976	382	581,238	1,067	816,226
1924	299,100	713,940	[1]	1,141,521	[1]	[1]	1,096	933,861
1925	306,100	763,743	[1]	1,188,571	359	739,920	1,081	1,127,470
1926	318,600	770,874	[1]	1,313,019	[1]	[1]	1,102	1,363,090
1927	323,300	901,129	[1]	1,445,428	354	828,835	1,119	1,641,144
1928	327,800	901,474	[1]	1,568,139	[1]	[1]	1,078	1,814,034
1929	328,200	1,007,323	53,545	1,917,693	390	987,708	1,087	2,233,688
1930	331,070	898,011	55,020	1,943,421	[1]	[1]	1,035	2,210,494
1931	315,850	851,081	55,756	1,686,436	376	894,608	937	1,831,918
1932	321,500	785,159	54,160	1,555,990	[1]	[1]	830	1,523,800
1933	326,850	905,656	53,660	1,555,474	389	461,254	779	1,420,000
1934	333,070	908,065	54,130	1,770,721	[1]	[1]	766	1,535,360
1935	340,990	996,596	53,790	1,916,595	395	966,243	715	1,651,986
1936	349,450	1,099,687	53,960	2,167,802	[1]	[1]	700	1,796,340
1937	363,030	1,279,160	54,440	[3] 2,447,620	365	1,183,440	696	2,065,434

[1] Data for establishments with products under $5,000 in value included for 1919 and prior years, but not for 1921 and subsequent years. Census data are limited to those establishments which refine crude petroleum by the process of distillation, therefore establishments are excluded that compound refined or partly refined petroleum products and that produce gasoline at the wells. Statistics of the industry as so defined were first collected in 1880.

[1] Data not available.

[3] Preliminary, subject to revision.

CRUDE OIL

Although popular legend gives "Colonel" E. L. Drake credit for starting the petroleum industry, the men who organized the Pennsylvania Rock Oil Co. and the Seneca Oil Co. were more responsible for establishing it on a commercial basis. Drake, nevertheless, should be recognized for his achievement in applying to the recovery of oil a technique that had been developed for salt-well drilling.

With the price of crude oil about $20 a barrel, successful completion of the Drake well was followed by a period of great excitement comparable with that which accompanied the discovery of gold in California. Drilling first was confined largely to the Oil Creek region of Pennsylvania, but before the end of 1860 development had spread to Ohio, West Virginia, Kentucky, and Tennessee. At the beginning of 1861 approximately 117 wells had been drilled, 73 of which were producing oil.

From the completion of the Drake well through 1929, the output of crude petroleum increased rapidly and outstripped the production expansion of virtually all other minerals. Between 1881 and 1930 the output of oil increased three times as rapidly as that of copper, lead, phosphate rock, or pig iron; about twice as fast as that of zinc or stone; and about a third faster than that of cement or gypsum. Indeed, of the principal minerals, only sulphur and pyrite exceeded the growth of crude-oil production from 1881 to 1930. During the post-war decade, moreover, when the rate of growth for many important minerals was retarded, the output of crude oil increased more rapidly than ever before. The depression temporarily checked expansion of output, but since 1932 the upward trend has been resumed. In 1936 and again in 1937 production exceeded all previous records. Output in the latter year was 1,279,160,000 barrels, an increase of 27 percent over 1929 and 16 percent over 1936.

The total production of crude oil in the United States from 1859 to 1937, inclusive, was about 19,973,887,000 barrels. Of this total, 95 percent was produced after the turn of the century and more than three-fourths after the termination of the World War.

NATURAL GAS

The marketed production of natural gas for 1889 has been calculated at 250 billion cubic feet.[4] By 1902 the total quantity of natural gas sold had increased to 281 billion cubic feet. Since 1906 statistics of natural-gas consumption have been collected annually, and the rise in output has closely paralleled that of petroleum. The pre-depression record was reached in 1930, when 1,943,421,000,000 cubic feet of natural gas were consumed. There was a moderate decline during the depression, but since 1933 the trend has been upward, and the marketed production in 1937 was 2,447,620,000,000 cubic feet, the largest on record.

[4] It should be noted that data on the actual quantities of natural gas brought to the surface are not available, for an adequate record of the losses of gas cannot be obtained. Consequently, the statistical record of natural-gas output consists primarily of the quantities of gas marketed or consumed. Even such figures reported for early years—as those reported by the Census for 1889 and 1902—may require extensive correction. For 1935 the Bureau of Mines estimated "gross production," representing essentially total production minus unmeasured losses at wellheads. (See Minerals Yearbook, 1937, p. 1060.)

PETROLEUM REFINING

As virtually all crude oil is refined to obtain usable products,[5] the growth of refining corresponds almost precisely with the increase of crude-oil production. The extraction of oil from coal was already a flourishing industry in 1859, when the Bureau of the Census reported 78 coal-oil and kerosene plants in operation in the United States. These establishments employed 1,473 wage earners, and the value of their product totaled $6,398,000. The distillation process was soon applied to the abundant crude-oil supplies that became available, and refining expanded sharply. Output, as indicated by runs of crude oil to stills, rose from 17,417,000 barrels in 1880 to 52,011,000 in 1899. The growth of refining continued, and by 1929 the crude oil run to stills totaled 987,708,000 barrels. During the depression, falling prices resulted in a sharp reduction of the total value of refinery products, but production was maintained remarkably well. In 1937, moreover, refinery operations exceeded all previous records, as 1,183,440,000 barrels of crude oil were processed. In recent years the throughput capacity of the refineries somewhat exceeded 4 million barrels of crude oil daily, or more than double their rated capacity at the end of the war. The cost of the raw materials and supplies used by the refineries in 1937 was $2,064,000,000 and the value of products at refineries totaled about $2,547,000,000.

NATURAL GASOLINE

Even more spectacular than the long-time increase in output in other branches of the petroleum and natural-gas industry has been the comparatively recent rise of production of natural gasoline, a relatively volatile gasoline extracted from natural gas. From the end of 1911, the beginning of the continuous annual record, through 1929, production of natural gasoline grew at an average rate of 123,681,000 gallons a year. In 1929 the output was 2,233,688,000 gallons, indicating a phenomenal increase over 18 years before.

A significant feature of natural-gasoline production is that it was affected by the depression much more seriously than other divisions of the industry. In contrast with decreases of 10 to 20 percent in the output of crude petroleum and natural gas, the production of natural gasoline declined more than 36 percent between 1929 and 1933. Although natural gasoline did not share proportionately in the subsequent recovery, production in 1937 was within 8 percent of the predepression peak.

Trend of Employment

The trend of employment in the oil and natural-gas industry was consistently upward through the boom year, 1929. Over this period

[5] According to Minerals Yearbook, 1938 (p. 815), the run of domestic crude oil to stills in 1936 amounted to 97 percent of the total production.

total labor requirements grew rapidly, both absolutely and in relation to the working population as a whole. Although employment reached a high point in 1929, the most rapid increase took place during the war decade.

With reference to the drop in employment that occurred with the onset of the business depression, it appears that the decline was less sharp than in most other branches of mining. The downward movement reached a low in 1932, and by 1935 a substantial proportion of the depression losses had been recovered. From 1935 to 1937, employment showed further important gains; over this period the number of men employed directly in primary phases of petroleum, natural-gas, and natural-gasoline production, for example, increased about 17 percent, and the man-hours worked by the same group showed a gain of about 34 percent. Over the same years the average number of wage earners employed and man-hours worked in refining establishments increased 7 and 9 percent, respectively. Recovery of employment in pipe-line transportation between 1935 and 1937 was also indicated by an increase of 17 percent in the number of wage earners employed by oil pipe lines that reported to the Interstate Commerce Commission.

Since data are inadequate for the compilation of a long-time statistical series on over-all employment covering every department of the oil and gas industry, the course of employment trends is best observed by noting developments in the principal segments of the industry for which statistical series can be developed. This is done in the following sections, which present available indicators of employment in primary production, petroleum refining, and pipe-line transportation.[6]

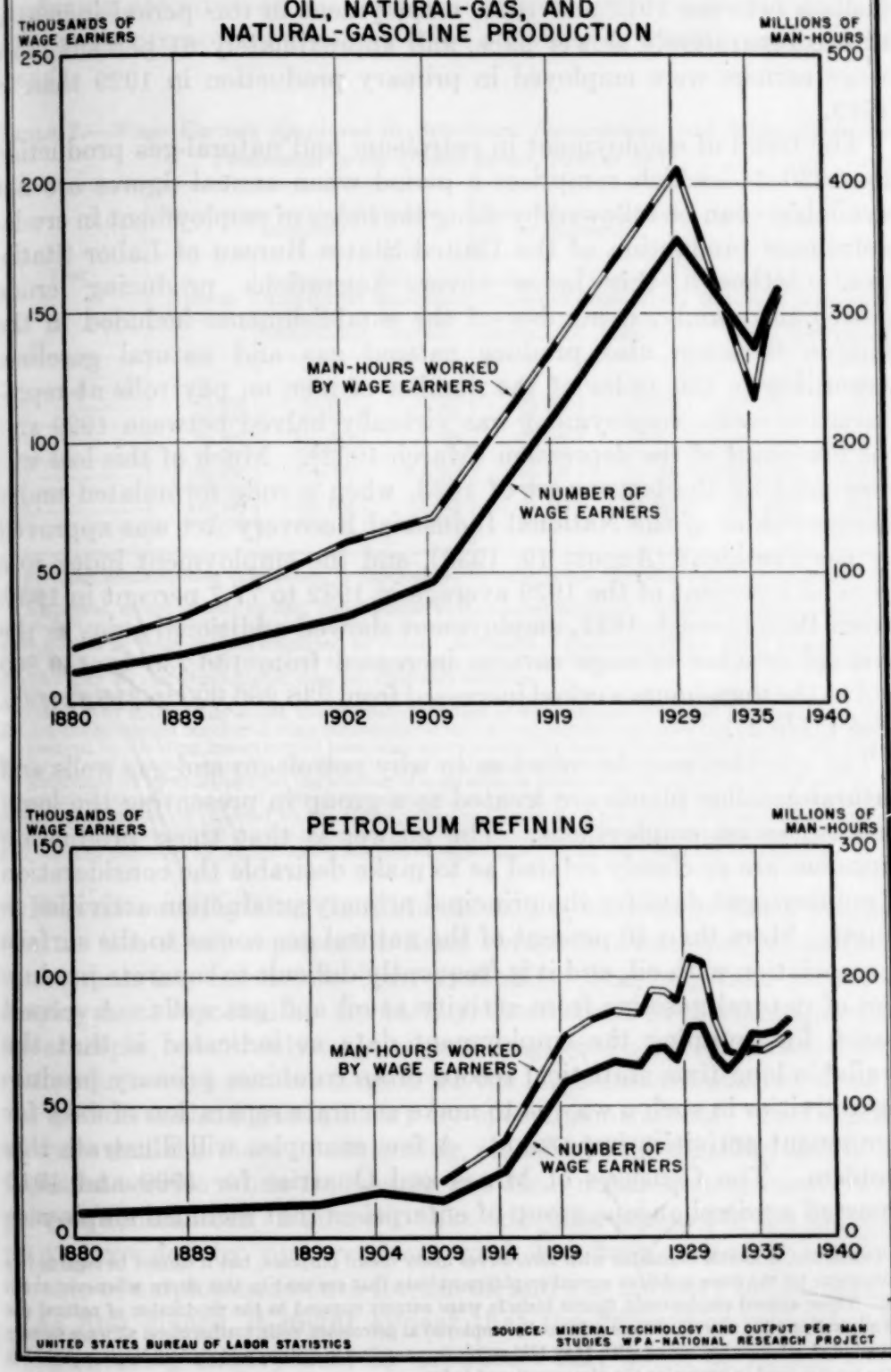
EMPLOYMENT AT OIL AND GAS WELLS AND NATURAL-GASOLINE PLANTS

In harmony with the general trend noted for the industry, employment in the primary production of crude oil, natural gas, and natural gasoline showed a remarkably rapid growth from the beginning of the record until 1929. As illustrated in figure 2, the long-time trends both in number of wage earners employed and man-hours worked have been notably upward (see also table 2). In the half century ended with 1929 the rate of growth was comparatively steady during the first 29 years, and from 1880 to 1909 an approximate fourfold

[6] Consideration on this basis eliminates employees engaged in marketing, who comprise a large proportion of the industry's labor force. The size of the labor force engaged in marketing, however, appears to be more closely related to retail trade practices than to technological changes. Reliable figures on employment in marketing, moreover, are not available for an extended period. Furthermore, the development of such figures even for a single year raises difficult statistical problems regarding the classification of persons working in filling stations who may be "employees" at one census period and "active proprietors" at another, due to a change in retailing policy from company-operated to leased stations or vice versa; in addition, there has been no actual count of the estimated 180,000 employees working at an estimated 140,000 garages, stores, and other enterprises that retail petroleum products as a side-line activity. (See Labor Project No. 465-97-3-7: Labor Relations in the Petroleum Industry, p. 2.)

FIG. 2

EMPLOYMENT IN THE PETROLEUM AND NATURAL-GAS INDUSTRY



gain took place in the number of wage earners required in primary production. A period of exceptionally rapid increase in employment opportunities occurred during the World War, when the number of men required more than doubled within the span of a single decade. Although the use of the automobile continued to expand in spectacular fashion between 1919 and 1929, employment in this period increased at a comparatively slower pace, and approximately 61 percent more wage earners were employed in primary production in 1929 than in 1919.

The trend of employment in petroleum and natural-gas production for 1930–34—which comprises a period when annual figures are not available—can be followed by using the index of employment in crude-petroleum production of the United States Bureau of Labor Statistics.[7] Although this index covers operations producing crude petroleum mainly, a number of the establishments included in the sample coverage also produce natural gas and natural gasoline. According to this index of the number of men on pay rolls at representative wells, employment was virtually halved between 1929 and the low point of the depression (March 1932). Much of this loss was recovered by the latter part of 1933, when a code formulated under the provisions of the National Industrial Recovery Act was approved by the President (August 19, 1933), and the employment index rose from 55.3 percent of the 1929 average in 1932 to 77.7 percent in 1934. From 1935 through 1937, employment showed additional gains as the average number of wage earners increased from 136,735 to 159,800 and as the man-hours worked increased from 236,260,000 to 315,924,000. (See table 2).

The question may be raised as to why petroleum and gas wells and natural-gasoline plants are treated as a group in presenting the long-time series on employment. The answer is that these production processes are so closely related as to make desirable the consideration of employment data for the principal primary production activities as a unit. More than 40 percent of the natural gas comes to the surface in association with oil, and it is frequently difficult to separate production of natural gasoline from activity at oil and gas wells. A second reason for grouping the employment data as indicated is that the available long-time statistical record often combines primary producing activities in such a way as to make accurate separation of data for component activities impossible. A few examples will illustrate this problem. The Censuses of Mines and Quarries for 1909 and 1919 reported a miscellaneous group of enterprises that included employees

[7] This index, available beginning with 1929, serves many useful purposes, but it cannot be regarded as a substitute for the more inclusive annual employment data that are used in this study whenever available. These annual employment figures include wage earners engaged in the production of natural gas and natural gasoline as well as those principally employed at petroleum wells; furthermore, all wage earners are included, whereas beginning with May 1935 employees engaged in drilling and rig building are excluded in the reports used in preparing the aforementioned index.

engaged in the production of petroleum and natural gas, and in 1919 natural gasoline also. Moreover, there are no data for any year (except estimates for 1935) that show separately the quantity of natural gas produced by oil wells. Finally, as is shown later in presenting material on output per man, the advantage of treating all primary producing activities as one unit in determining labor productivity is still another reason for grouping these activities in tracing employment trends.

TABLE 2.—*Wage Earners Employed in Petroleum, Natural-Gas, and Natural-Gasoline Production in the United States, 1880 to 1937*

Year	Wage earners employed by regular producers [1]			Wage earners employed by contractors		Total	
	Average number	Estimated man-hours worked (thousands)	Estimated man-hours per wage earner	Estimated man-hours worked (thousands)	Estimated number of wage earners [2]	Estimated number of wage earners	Estimated man-hours worked (thousands)
1880	[3]	[3]	[3]	[3]	[3]	11,477	41,317
1889	12,500	44,967	3,597	22,359	6,000	18,500	67,326
1902	23,000	81,824	3,558	41,000	10,400	33,400	122,824
1909	36,749	111,488	3,034	29,394	10,000	46,749	140,882
1919	93,205	230,345	2,471	44,958	18,000	111,205	275,303
1929	[4] 142,000	328,032	[5] 2,310	85,288	37,000	[6] 179,000	413,320
1935	108,735	187,727	1,726	48,533	28,000	136,735	236,260
1936	119,100	228,633	1,920	59,445	31,000	150,100	288,078
1937	126,800	250,733	1,977	65,191	33,000	159,800	315,924

[1] Excludes nonproducing enterprises, as represented by enterprises reporting employment but no production.

[2] All figures, except the one for 1902, were rounded to the nearest thousand. These estimates represent the number of wage earners that are equivalent to the number working the same number of hours per year as were worked by wage earners employed by regular producers. Inasmuch as the latter probably work more continuously than contractor's employees, the actual number of wage earners employed by contractors may be somewhat higher than the estimates indicate.

[3] Data not available.

[4] Derived by subtracting 37,000, the estimated number of wage earners employed by contractors, from 179,000, the estimated number of wage earners employed by both regular producers and contractors.

[5] Derived by dividing the estimated total man-hours worked by wage earners employed by both regular producers and contractors by 179,000, the estimated total number of wage earners employed.

[6] Estimated by subtracting from the number of wage earners attached to the industry (as reported by the Census of Occupations for April 1930) the number of unemployed wage earners (as derived from the number of unemployed persons reported by the Unemployment Census for April 1930). The result was then corrected to represent 1929 by the use of Bureau of Labor Statistics indexes of crude-petroleum employment, and was also corrected for the estimated amount of understatement by the Census of Occupations.

It is noteworthy that the data on employment in primary production in this study represent a more complete accounting of employment than has heretofore been available. The long-time record of employment reported by the various Censuses of Mines and Quarries, for example, covers only wage earners employed by producers and does not include wage earners needed for the large amount of work done in the petroleum and gas industry by special contractors. The drilling of wells and the tasks of cementing, cleaning, acid treating, and other types of service work frequently are done under arrangements with private contractors. Failure to take adequate account of the employment provided by such contract work has been one of the serious defects of employment data for the oil and gas industry in the past.

At first glance, it might appear that the difficulties presented by data covering employment by producers only could be largely over-

come by using the number of workers attached to the oil and gas industry as reported by the various Censuses of Occupations. These data, however, present difficulties of comparability as well as of understatement of the number of wage earners actually employed. Part of the difficulty is the fact that occupations in the several decennial census reports have not always been treated alike and the occupational groupings are not entirely consistent. The classification "oil- and gas-well operatives" is more homogeneous and comparable than any other group; the number of persons reported under this classification, however, is available for only three decennial census periods beginning with 1910, and the numbers of workers so reported are below the numbers of "wage earners" reported by the Census of Mines and Quarries for 1909 and for 1919. This is because the classification excluded some wage earners and because the enumerative Censuses of Occupations were probably incomplete. Another reason why the Census of Occupations data do not meet the needs of this study is that they include unemployed as well as employed persons, a serious factor in 1930. Moreover, it has not been practicable to use these data for man-hours calculations.

For the purpose of this survey, the figures on wage earners employed by producers—reported by the Censuses of Mines and Quarries—have been supplemented by estimates covering both the number of wage earners and man-hours worked by wage earners rendering contract services.[8] In preparing these data for recent years, the authors had the benefit of a special analysis of reports submitted by contractors in connection with the census of petroleum, natural-gas, and natural-gasoline production conducted jointly by the Bureau of Mines and the Census of Business for 1935. For earlier years the estimates are the result of an unpublished statistical study by N. Yaworski, R. L. Kiessling, and J. J. Ossermann of the National Research Project. Although the precise accuracy of the derived figures cannot be determined, the probable error is believed to be slight and the data are presented and used here with confidence.

EMPLOYMENT IN REFINING

Broadly speaking, the long-time trend of employment in petroleum refining corresponds closely with that for crude-oil and natural-gas production. A period of very rapid relative growth of employment before 1880, was followed by a more measured increase during the next quarter of a century. By 1904 there were 16,770 wage earners employed at refineries. The statistical record indicates that the upward trend was checked during the next 5 years, but at least a part of the

[8] Even with these estimates included, the employment data do not quite account for all persons who perform manual labor in the production of oil and gas; they exclude a number of small proprietors, mostly farmers, who devote a part of their time to operating wells on their property. For example, in 1909 and 1919, the only years for which this information was available, 2,155 and 1,987 proprietors, respectively, were reported performing manual labor.

small decrease in employment between 1904 and 1909 was due to a change in methods of reporting data. In the 1909 Census, for example one of the largest refineries made a separate report for its box, cooperage, and tin shops, whereas these activities had been previously included in a single general report. The second decade of the new century, however, witnessed a sharp advance in labor requirements, and a more than threefold increase in the number of wage earners employed took place between 1909 and 1919. Employment continued to expand during the post-war decade but at a much less rapid rate than in the 10 preceding years. The trend, however, was steadily upward, and by 1929 the average number of wage earners employed in petroleum refining was 80,596.

Employment in refining declined during the depression but less sharply than in almost any other major unit of the industry. According to the Bureau of Labor Statistics index of employment in petroleum refining, the number of workers employed by refineries in November 1932—the depression low—was 78 percent of the average for 1929. This drop was much less than that already noted for employment for petroleum, natural-gas, and natural-gasoline production. Employment recovered rapidly after 1932 and by 1935 the number of wage earners was only slightly short of the predepression peak. The number of workers continued to increase and in 1937 reached the all-time record of 83,183 men. The number of man-hours worked in the same year, however, was 28 percent less than in 1929.

TABLE 3.—*Barrels of Crude Oil Run to Stills, Wage Earners Employed, and Barrels Refined Per Wage Earner in Petroleum Refining, 1880 to 1937*

Year	Crude oil run to stills (thousands of 42-gallon barrels)	Employment of wage earners		Barrels of crude oil refined per—	
		Average number	Estimated man-hours worked	Man-year	Man-hour
1880	17,417	9,869	(1)	1,765	(1)
1889	30,663	11,403	(1)	2,689	(1)
1899	52,011	12,199	(1)	4,264	(1)
1904	66,983	16,770	(1)	3,994	(1)
1909	120,775	13,929	42,010,000	8,671	2.9
1914	191,263	25,366	73,866,000	7,540	2.6
1919	365,272	58,889	154,643,000	6,203	2.4
1921	443,363	63,189	166,591,000	7,016	2.7
1923	581,238	66,717	173,811,000	8,712	3.3
1924	643,719	62,301	162,954,000	10,332	4.0
1925	739,920	65,324	171,541,000	11,327	4.3
1926	779,264	71,811	189,323,000	10,852	4.1
1927	828,835	72,234	188,542,000	11,635	4.4
1928	913,295	67,862	180,323,000	13,458	5.1
1929	987,708	80,596	214,998,000	12,255	4.6
1930	927,447	80,918	211,228,000	11,462	4.4
1931	894,608	68,824	165,701,000	12,998	5.4
1932	819,997	63,913	142,577,000	12,830	5.8
1933	861,254	69,047	139,668,000	12,473	6.2
1934	895,636	77,533	143,529,000	11,552	6.2
1935	966,243	77,402	142,884,000	12,483	6.8
1936	1,068,570	78,420	148,026,000	13,626	7.2
1937	1,183,440	83,183	155,719,000	14,227	7.6

[1] Data not available.

EMPLOYMENT IN PIPE-LINE TRANSPORTATION

Labor requirements in pipe-line transportation also have increased sharply. In this branch of the industry there were two periods of very rapid growth in employment. The first coincided with the development of the pipe-line system in the late seventies and eighties, and the second with the remarkable expansion that began during the World War and continued thoughout most of the post-war decade.

As a complete survey of employment in pipe-line transportation has never been made, even for a single year, long-time statistical series on the number of wage earners employed and man-hours worked are not available. A very rough notion of the trend since the turn of the century is suggested by a threefold increase from 1910 to 1920 in the number of *laborers* attached to the pipe-line industry as reported by the Census of Occupations for these years; this increase was followed in the next decade by almost a twofold gain in the same class of workers. Such a trend is, of course, merely suggestive, for although laborers comprised about 55 percent of the total gainful workers reported as attached to the pipe-line industry in 1930, the ratio of laborers to other classes of wage earners employed by pipe lines probably changed in important fashion over the period for which Census of Occupations data are available.

Beginning with 1922 it has been possible to develop indicators of transportation service rendered, employment, and output per man for the important segment of pipe-line transportation represented by oil and gasoline lines that come under the jurisdiction of the Interstate Commerce Commission. These companies represent more than 80 percent of the total mileage utilized for the shipment of crude petroleum and refined products (see table 4).

As is shown in the middle diagram of chart 4, the year of peak employment since 1922 was not 1929 or 1930, but 1927. Thereafter the trend was steadily downward until 1932, when the number of wage earners was only slightly more than half the 1927 high. Since the depression low there has been a vigorous upward movement, and in 1937 the number of wage earners exceeded the number employed in 1929, but was still considerably below the level of the year of peak employment.

Although these data, presented graphically in chart 4, trace recent trends in employment and output per man for pipe lines handling crude oil and refined products, it should be noted that they understate the rate of increase in the total volume of employment for the entire pipe-line system. Oil pipe lines, for example, do not include the very important and more recent long-distance natural-gas pipe lines. The remarkable growth of such lines since the World War has tended to increase total pipe-line employment. Unfortunately, no reliable statistical series on employment by natural-gas pipe lines

are available. In addition, labor data reported by regular pipe-line companies—whether or not engaged in the transportation of oil or natural gas—usually do not include much of the employment required for pipe-line construction. There are, of course, some companies that undertake their own construction, but this work is done either largely or entirely for many companies by special contractors. Reasonably complete figures on the amount of employment provided by pipe-line construction could be obtained only by a special survey.

TABLE 4.—*Volume of Business, Wage Earners, and Output Per Man, in Oil Pipe Lines Under Interstate Commerce Commission, 1922 to 1937*

Year	Volume of transportation service				Average number of employees				Indicators of output per man			
	Miles of pipe lines [1]	Barrels of oil [2] transported (millions)	Barrel-miles of oil transported (millions)	Pipe-line operating revenue [3] (thousands)	Wage earners	Salaried employees		Total	Miles of line per wage earner	Barrels of oil transported per wage earner	Barrel-miles per wage earner (thousands)	Revenue per wage earner
						Field	Office					
1922	57,349	(4)	156,169	$128,059	14,619	835	1,945	17,399	3.9	(4)	10,683	$8,760
1923	64,760	(4)	160,015	131,213	20,730	1,183	2,142	24,055	3.1	(4)	7,719	6,330
1924	68,185	(4)	179,172	146,921	19,323	1,103	2,034	22,460	3.5	(4)	9,272	7,603
1925	70,009	831	200,786	164,645	17,863	978	1,852	20,693	3.9	46,532	11,240	9,217
1926	72,846	836	211,067	173,075	24,198	945	2,203	27,346	3.0	34,531	8,722	7,152
1927	76,070	989	238,489	195,561	25,252	1,063	2,096	28,411	3.0	39,182	9,444	7,744
1928	81,676	1,053	270,821	222,073	21,849	1,188	2,233	25,270	3.7	48,203	12,395	10,164
1929	85,796	1,156	306,599	251,411	19,976	1,067	2,414	23,457	4.3	57,887	15,348	12,586
1930	88,728	1,172	290,134	237,910	19,037	530	2,381	21,948	4.7	61,573	15,241	12,497
1931	93,090	1,110	271,883	222,944	16,708	1,256	1,890	19,854	5.6	66,406	16,273	13,344
1932	92,782	1,121	258,279	211,789	13,476	1,090	1,725	16,291	6.9	83,174	19,166	15,716
1933	93,724	1,189	264,869	217,192	16,189	930	1,765	18,884	5.8	73,450	16,361	13,416
1934	93,070	1,214	242,885	199,166	17,901	1,024	1,928	20,853	5.2	67,798	13,568	11,126
1935	92,037	1,059	250,119	197,368	17,853	1,613	2,049	21,515	5.2	59,309	14,010	11,055
1936	94,060	1,102	271,008	219,057	19,826	1,345	2,064	23,235	4.7	55,569	13,669	11,049
1937	96,612	1,288	303,016	248,645	20,803	1,188	2,177	24,168	4.6	61,934	14,566	11,952

[1] Data represent 82, 81, 81, and 82 percent of the total gathering and trunk oil pipe-line mileage in the United States in 1924, 1926, 1931, and 1936, respectively.

[2] Data include crude and refined oil transported, and represent the sum of the oil originated on the lines of each reporting company and that received from connecting lines. Since some of the oil was handled by 2 or more companies and was included in the reports of each company this aggregate involves a considerable amount of duplication and is larger than the actual quantity of oil transported. It is believed that the duplication amounts to about one-fourth of the shipments indicated and that the amount of duplication has not varied from year to year; hence the figures indicate the approximate trend of the quantity of oil transported.

[3] Includes transportation, storage, demurrage, rent, and miscellaneous revenues. However, an analysis of the total for 1936 (from data supplied by the Bureau of Statistics, Interstate Commerce Commission) indicates that 98 percent of the total represented transportation revenue.

[4] Data not available.

Increasing Output Per Worker Employed

The history of the petroleum and natural-gas industry represents an almost continuous record of successive economies in unit labor requirements. Although the same tendency has been a feature of virtually all branches of mining, increasing output per worker in petroleum and natural-gas production is especially significant because this activity ranks second among the mineral industries as an employer of labor and because the production of oil and gas has always required a relatively small amount of labor per unit of product. In fact, it is largely due to the mushroomlike growth of the petroleum and natural-

gas industry that the increased output per worker employed in mining as a whole has outstripped that of all other basic industries. Despite the depression influences that operated after 1929, it is noteworthy that the trend of output per man in the petroleum and natural-gas industry has continued upward strikingly.

RISE OF UNIT OUTPUT AT OIL AND GAS WELLS AND NATURAL-GASOLINE PLANTS

An outstanding reduction in man-power requirements per unit of product has taken place over an extended period in the primary producing segment of the industry. As is shown in figure 3, output per man-hour increased more than 850 percent between 1880 and 1935 (see also table 5).[9]

A feature of the long-time record of output per man-hour for primary producing activities is the large share of the aggregate increase that has taken place in relatively recent years. Gains in unit yield, it is true, approximately tripled in the 30 years ended with 1909. A more than threefold gain was recorded, however, in the relatively short span from 1919 to 1935. Very significant, also, is the continued increase in labor productivity between 1929 and 1935, when output per man-hour increased 72 percent. Slightly lower output per man-hour in the 2 years after 1935 is explained by the expanding drilling campaign that required additional workers.

The data on output per man-hour presented in accompanying figures and tables treat activities at oil and natural-gas wells and natural-gasoline plants as a group for the same reasons that have already been discussed in connection with employment trends. In addition to the problems noted in developing comparable figures on employment, unit worker output of joint products is more useful and less apt to be misleading if expressed in terms of a common denominator. For the purposes of this study, such unlike units as barrels of crude petroleum, cubic feet of natural gas, and gallons of natural gasoline are converted to their B. t. u. equivalents in developing the output-per-man-hour series. The factors used in making these calculations are indicated in table 5. There is very little difference between a trend of output per man as determined on the basis of heat value of products and a trend determined on the basis of quantities weighted by value.

[9] The few irregularities in the long-time upward trend of output per man are explained mainly by unusual conditions that prevailed in census periods. From 1889 to 1902, for example, there was a notable increase in output per man-hour in petroleum production that was more than offset by a decline in productivity in natural-gas fields, as gas-well pressures dropped notably and production failed to keep pace with employment; this development, vividly recorded in the census results for 1902, was soon remedied by new discoveries. Likewise, failure to show more of an increase in unit output during the decade ended with 1919 is associated with war-time factors of high prices, urgent demand, extensive drilling, and the operation of properties that would have been submarginal under more normal economic conditions.

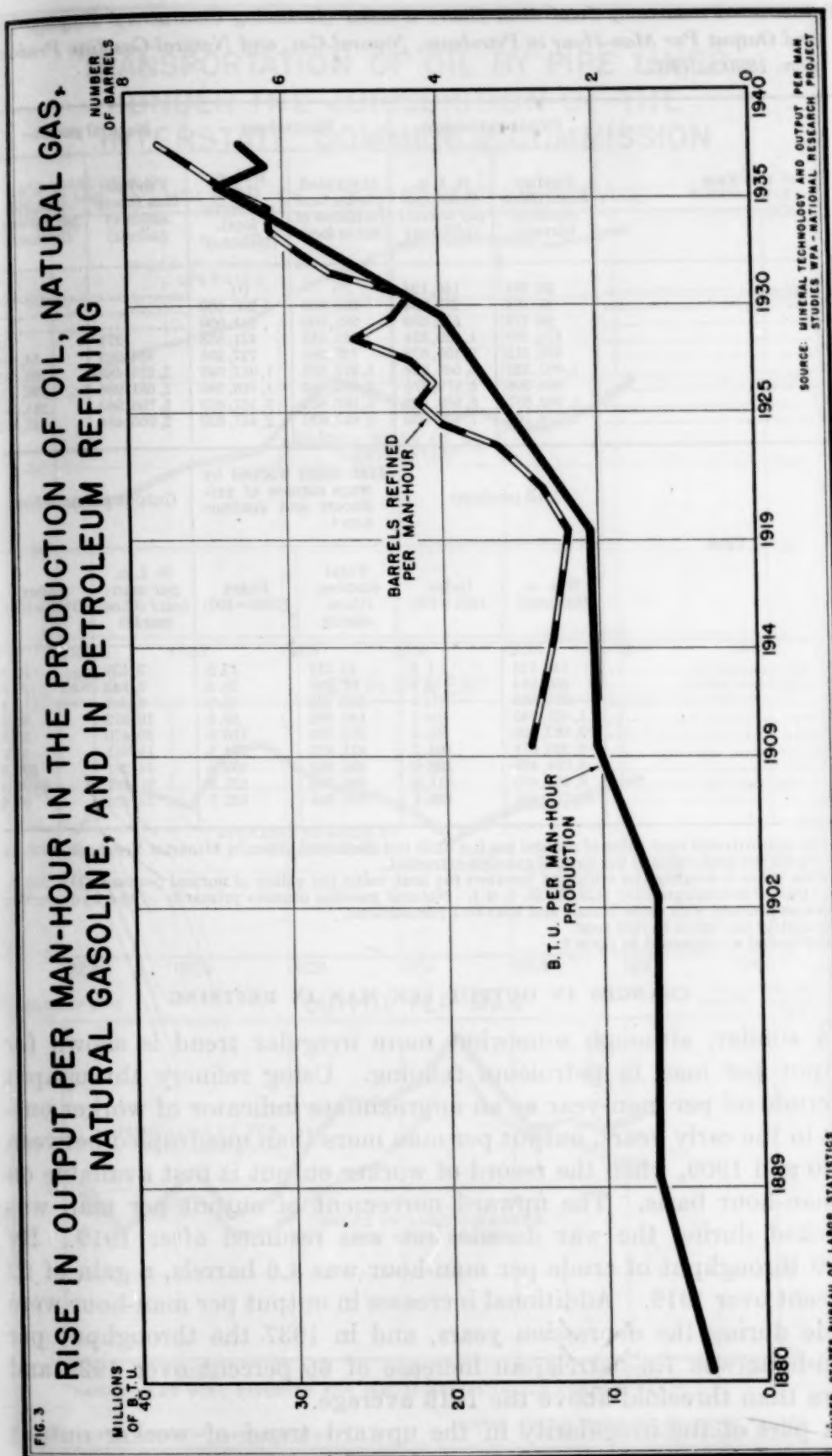


FIG. 3
RISE IN OUTPUT PER MAN-HOUR IN THE PRODUCTION OF OIL, NATURAL GAS, NATURAL GASOLINE, AND IN PETROLEUM REFINING
MILLIONS OF B.T.U.
NUMBER OF BARRELS
BARRELS REFINED PER MAN-HOUR
B.T.U. PER MAN-HOUR PRODUCTION
1880
1889
1902
1909
1914
1919
1925
1930
1935
1940
SOURCE: MINERAL TECHNOLOGY AND OUTPUT PER MAN STUDIES WPA - NATIONAL RESEARCH PROJECT
UNITED STATES BUREAU OF LABOR STATISTICS

TABLE 5.—*Production, Total Man-Hours Worked (Including Contractors' Employees), and Output Per Man-Hour in Petroleum, Natural-Gas, and Natural-Gasoline Production, 1880 to 1937*

Year	Crude petroleum		Natural gas		Natural gasoline	
	Production (thousands of barrels)	B. t. u. (6,000,000 per barrel) (billions)	Marketed production (millions of cubic feet)	B. t. u. (1,000 per cubic foot) (billions)[1]	Production (thousands of gallons)	B. t. u.[2] (120,000 per gallon) (billions)
1880	24,354	146,124	[3]	[3]		
1889	35,164	210,984	250,000	250,000		
1902	89,275	535,650	281,000	281,000		
1909	171,559	1,029,354	431,853	431,853	271	33
1919	350,112	2,100,672	727,295	727,295	454,089	54,491
1929	1,007,323	6,043,938	1,917,693	1,917,693	2,233,688	268,043
1935	996,596	5,979,576	1,916,595	1,916,595	1,651,986	198,238
1936	1,099,687	6,589,122	2,167,802	2,167,802	1,796,340	215,561
1937	1,279,160	7,674,960	2,447,620	2,447,620	2,065,434	247,852

Year	All products		Man-hours worked by wage earners of producers and contractors[4]		Output per man-hour	
	B. t. u. (billions)	Index (1935=100)	Total number (thousands)	Index (1935=100)	B. t. u. per man-hour (thousands)	Index (1935=100)
1880	146,124	1.8	41,317	17.5	3,537	10.3
1889	460,984	5.7	67,326	28.5	6,847	20.0
1902	816,650	10.1	122,824	52.0	6,649	19.4
1909	1,461,240	18.1	140,882	59.6	10,372	30.3
1919	2,882,458	35.6	275,303	116.5	10,470	30.6
1929	8,229,674	101.7	413,320	174.9	19,911	58.1
1935	8,094,409	100.0	236,260	100.0	34,261	100.0
1936	8,981,485	111.0	288,078	121.9	31,177	91.0
1937	10,370,432	128.1	315,924	133.7	32,826	95.8

[1] The approximate heat value of natural gas is a little less than that given in Minerals Yearbook, 1938, as it excludes the heat value of the natural gasoline extracted.
[2] This value is roughly the midpoint between the heat value per gallon of normal pentane (113,200 B. t. u.) and of average gasoline (129,060 B. t. u.). Natural gasoline consists primarily of the hydrocarbon known as pentane with some hexane and heavier hydrocarbons.
[3] Quantity negligible in this year.
[4] Estimated as explained in table 2.

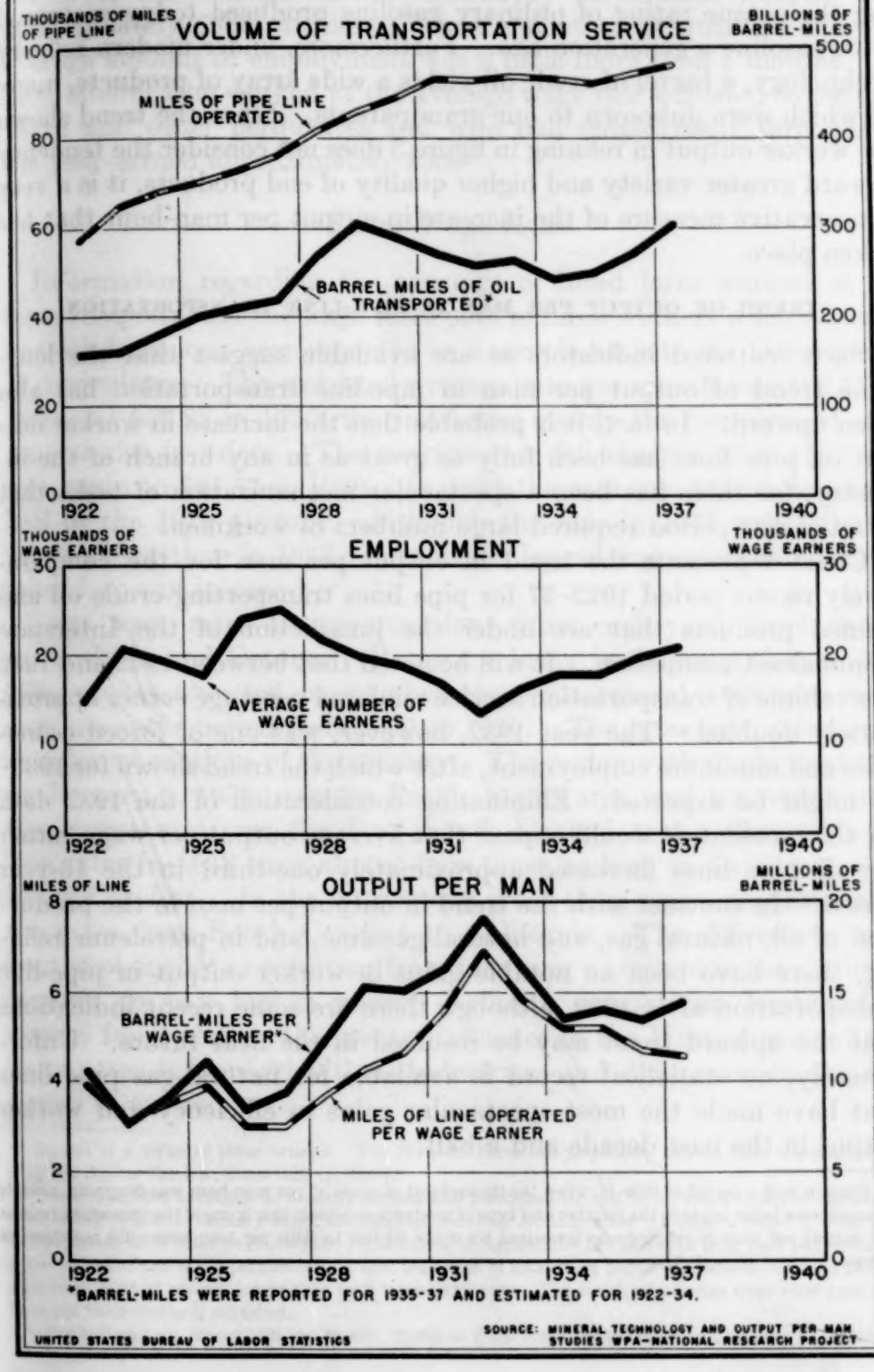
CHANGES IN OUTPUT PER MAN IN REFINING

A similar, although somewhat more irregular trend is shown for output per man in petroleum refining. Using refinery throughput of crude oil per man-year as an approximate indicator of worker output in the early years, output per man more than quadrupled between 1880 and 1909, when the record of worker output is first available on a man-hour basis. The upward movement of output per man was checked during the war decade but was resumed after 1919. By 1929 throughput of crude per man-hour was 4.6 barrels, a gain of 92 percent over 1919. Additional increases in output per man-hour were made during the depression years, and in 1937 the throughput per man-hour was 7.6 barrels, an increase of 65 percent over 1929 and more than threefold above the 1919 average.

A part of the irregularity in the upward trend of worker output indicated for petroleum refining is introduced by measuring output

CHART 4.

TRANSPORTATION OF OIL BY PIPE LINES UNDER THE JURISDICTION OF THE INTERSTATE COMMERCE COMMISSION



*BARREL-MILES WERE REPORTED FOR 1935-37 AND ESTIMATED FOR 1922-34.

UNITED STATES BUREAU OF LABOR STATISTICS

SOURCE: MINERAL TECHNOLOGY AND OUTPUT PER MAN STUDIES WPA-NATIONAL RESEARCH PROJECT

per man on the basis of refinery throughput or "crude oil run to stills." Such a measure, of course, simply shows the volume of crude oil the refineries handled per man-hour worked. It makes no allowance for the broad changes and improvements in the products of the refineries.[10] That these changes have been significant is illustrated simply by noting the octane rating of ordinary gasoline produced today compared with gasoline a generation ago. Furthermore, under modern refinery technology, a barrel of crude oil yields a wide array of products, many of which were unknown to our grandparents. Since the trend shown for worker output in refining in figure 3 does not consider the tendency toward greater variety and higher quality of end products, it is a very conservative measure of the increase in output per man-hour that has taken place.

TREND OF OUTPUT PER MAN IN PIPE-LINE TRANSPORTATION

Such scattered indicators as are available suggest that the long-time trend of output per man in pipe-line transportation has also been upward. In fact, it is probable that the increase in worker output on pipe lines has been fully as great as in any branch of the industry, for there has been a spectacular mechanization of tasks that in an earlier period required large numbers of workmen.

Chart 4 presents the trend in output per man for the comparatively recent period 1922–37 for pipe lines transporting crude oil and refined products that are under the jurisdiction of the Interstate Commerce Commission. It will be noted that between 1922 and 1932 the volume of transportation service rendered per wage earner approximately doubled. The year 1932, however, was one of forced economies and minimum employment, after which the trend shown for 1933–36 might be expected. Eliminating consideration of the 1932 data for the moment, it would appear that average output per wage earner for oil pipe lines increased approximately one-third in the 16-year period. In contrast with the trend in output per man in the production of oil, natural gas, and natural gasoline, and in petroleum refining, there have been no notable gains in worker output in pipe-line transportation after 1932, although there are some recent indications that the upward trend may be resumed in the near future. Unfortunately, no statistical record is available for natural-gas pipe lines that have made the most spectacular gains in efficiency and worker output in the past decade and a half.

[10] Even in such a period as 1914–19, when the throughput of crude oil per man-hour was dropping, notable advances were being made in the number and type of products obtained; this is one of the important reasons why output per man in refining—as measured by crude oil run to stills per man-hour—did not show an increase.

WAGES AND INCOME OF FARM WORKERS, 1909 TO 1938[1]

IN 1938, the average amount earned by hired farm workers was approximately $300, including board and other perquisites, and the average amount of employment was a little more than 7 months. A farm laborer who worked at the average wage rate adjusted to include board and other perquisites and who had employment throughout the year earned approximately $500.

Farm Wage Rates

Information regarding the earnings of hired farm workers is far from adequate, but the wage rates paid to hired workers when actually at work have long been reported on a sample basis to the Department of Agriculture. The weighted average rate per month was $23.77 in 1909 and $59.88 in 1920, the rise being mainly the complement of a general rise in prices. The average rate fell sharply after 1920 but rose again to $44.52 in 1929. In 1933 the rate was $21.10, less than half of the 1929 average. Although the rate in 1938 was $30.61—much higher than in 1933—farm wages lagged seriously behind many other forms of income.[2]

Farm wage rates are reported four times each year, for January, April, July, and October. Rates are lower in January than in any other month reported except when there is a general downward tendency, as in the period from 1930 to 1932. The rates vary extensively in different sections of the country. The region with the highest rate on January 1, 1939, was the Pacific States area, and the region with the lowest rate was the East South Central area. (See table 2.) The rates in 1938 were almost four times as high in California as in South Carolina. In the intervening areas there was a gradual rise in the rates from South Carolina to California. The differences have been explained[2a] as resulting from increases westward in the ability of farmers to pay higher wages; declining competition westward of unpaid family labor; the greater influence in the West of competitive wage rates in nonagricultural industries; and differences in the efficiency of workers.

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[1] Second of a series of three articles. The first, on Farm Employment, 1909 to 1938, appeared in the Monthly Labor Review, June 1939 (p. 1241).

[2] These weighted averages, as recently revised and published by the U. S. Department of Agriculture (Crops and Markets, January 1939), are significant mainly for indicating the general trend of wage rates. In estimating total wage payments the Department of Agriculture has added to total cash payments estimates of board and other perquisites. These estimates of total wage payments ranged, between 1909 and 1938, from 34 to 43 percent larger than cash wage payments. The weighted average wage rates here given have not been similarly adjusted.

[2a] Rural Sociology, March 1939 (pp. 36–42): Profile of Wage Rates in the Southwest, by Prof. E. D. Tetreau.

TABLE 1.—*Farm Wage Rates in the United States, 1909 to 1939* [1]

Year	Farm wage rates				Weighted average rate per month	
	Per month—		Per day—		Amount	Index numbers (average, 1924-29=100)
	With board	Without board	With board	Without board		
1909	$22.21	$28.10	$1.09	$1.30	$23.77	54.0
1914	22.62	29.74	1.17	1.43	25.13	57.1
1919	43.29	56.63	2.54	3.03	51.13	116.2
1923	37.24	48.25	1.89	2.25	41.87	95.2
1924	37.92	49.32	1.94	2.29	42.91	97.5
1925	38.77	49.90	1.97	2.29	45.51	98.9
1926	39.87	50.83	1.98	2.31	44.36	100.8
1927	40.11	50.85	1.98	2.28	44.36	100.8
1928	40.11	50.72	1.98	2.27	44.28	100.7
1929	40.61	51.22	1.96	2.25	44.52	101.2
1930	37.59	48.10	1.76	2.08	41.25	93.8
1931	28.77	38.38	1.32	1.62	32.11	73.0
1932	20.85	28.88	.94	1.20	23.66	53.8
1933	18.07	25.67	.85	1.11	21.10	48.0
1934	20.24	28.19	.98	1.26	23.61	53.7
1935	22.42	30.24	1.07	1.33	25.53	58.0
1936	24.53	32.28	1.15	1.42	27.51	62.5
1937	28.00	36.32	1.33	1.61	31.25	71.0
1938	27.72	35.63	1.31	1.58	30.61	69.6
April 1, 1938	27.60	33.82	1.25	1.55	29.88	67.9
July 1, 1938	28.95	37.28	1.38	1.63	32.00	72.7
October 1, 1938	28.25	36.09	1.36	1.59	31.20	70.9
January 1, 1939	24.86	34.92	1.20	1.53	29.03	66.0
April 1, 1939	27.08	35.42	1.23	1.53	30.03	68.3

[1] Figures recently revised by the U. S. Bureau of Agricultural Economics. See Crops and Markets, January and April 1939.

TABLE 2.—*Regional and Seasonal Variations in Farm Wage Rates, April 1, 1938, to April 1, 1939*

[Source: U. S. Bureau of Agricultural Economics]

Geographic division and date	Rate per month—		Rate per day—		Geographic division and date	Rate per month—		Rate per day—	
	With board	Without board	With board	Without board		With board	Without board	With board	Without board
United States:					Middle Atlantic:				
April 1, 1938	$27.60	$33.82	$1.25	$1.55	April 1, 1938	$29.18	$46.01	$1.69	$2.32
July 1, 1938	28.95	37.28	1.38	1.63	July 1, 1938	30.05	46.56	1.79	2.37
October 1, 1938	28.25	36.09	1.36	1.59	October 1, 1938	29.42	45.83	1.78	2.39
January 1, 1939	24.86	34.92	1.20	1.53	January 1, 1939	27.05	44.15	1.61	2.20
April 1, 1939	27.08	35.42	1.23	1.53	April 1, 1939	28.48	45.39	1.64	2.26
Pacific:					West North Central:				
April 1, 1938	44.39	66.68	1.95	2.81	April 1, 1938	28.35	38.93	1.39	1.92
July 1, 1938	44.19	65.96	2.10	2.78	July 1, 1938	29.47	39.82	1.56	2.09
October 1, 1938	41.83	62.05	2.02	2.71	October 1, 1938	28.83	39.20	1.59	2.12
January 1, 1939	41.35	62.49	1.92	2.62	January 1, 1939	21.98	33.33	1.25	1.74
April 1 1939	40.89	62.31	1.96	2.66	April 1, 1939	28.21	38.41	1.38	1.87
Mountain:					West South Central:				
April 1, 1938	34.95	51.00	1.63	2.19	April 1, 1938	18.70	27.29	.93	1.22
July 1, 1938	37.37	53.53	1.74	2.31	July 1, 1938	19.39	28.37	.99	1.28
October 1, 1938	36.84	52.29	1.81	2.33	October 1, 1938	19.19	27.86	.97	1.24
January 1, 1939	30.96	46.22	1.53	2.09	January 1, 1939	18.08	26.83	.92	1.19
April 1, 1939	35.03	51.00	1.61	2.22	April 1, 1939	18.54	26.94	.92	1.18
New England:					South Atlantic:				
April 1, 1938	31.83	55.66	1.73	2.55	April 1, 1938	16.50	24.43	.86	1.15
July 1, 1938	33.40	57.23	1.84	2.62	July 1, 1938	17.06	25.11	.89	1.19
October 1, 1938	31.83	55.13	1.84	2.58	October 1, 1938	16.41	24.40	.87	1.16
January 1, 1939	31.08	54.71	1.72	2.56	January 1, 1939	16.54	24.93	.86	1.18
April 1, 1939	31.92	56.23	1.73	2.72	April 1, 1939	16.10	24.32	.84	1.14
East North Central:					East South Central:				
April 1, 1938	29.11	41.03	1.53	2.02	April 1, 1938	15.78	22.73	.78	1.00
July 1, 1938	29.91	41.91	1.66	2.16	July 1, 1938	15.98	23.05	.80	1.03
October 1, 1938	29.74	41.68	1.65	2.16	October 1, 1938	15.68	22.66	.77	1.03
January 1, 1939	25.40	37.95	1.43	1.94	January 1, 1939	15.54	22.47	.77	1.03
April 1, 1939	28.80	40.91	1.50	2.03	April 1, 1939	15.97	22.95	.78	1.02

Average Earnings

Average farm wage rates should not be confused with average earnings, which were vitally affected by the amount of employment available. Average earnings of farm wage earners roughly comparable to the averages in nonagricultural employments may be computed from the revised estimates of number of hired farm workers and of total farm wages, including board and other perquisites.[3] These estimates indicate that hired farm workers earned, on the average, in 1909, $256;[4] in 1914, $276; and in 1919, $544. This rise was mainly a result of higher prices. After 1920 there was a sharp decline, the average falling below $400 in 1921 and 1922 and then rising above $400, the figure for 1929 being $430. The average for 1933 was only $212, and in 1938, $300. (See table 3 and chart 1.)

Comparisons with other industries are subject to qualification. Thus, if the comparison is between farm and factory workers there is the question of the amount of nonagricultural employment obtained by farm workers and of nonmanufacturing employment obtained by factory workers. The average annual wage of hired farm workers, when board and other perquisites are included, was about 50 percent of the average wage of factory workers in 1909; about 47 percent in 1919; 34 percent in 1924; 33 percent in 1929; 25 percent in 1932; and 27 percent in 1938. During the same period, the hours of labor in manufacturing industries were progressively reduced and the hours of hired farm workers underwent little change. Price trends affected somewhat differently the earnings of the two types of workers (table 3). The skills required also qualify the comparison. Many types of farm work, especially on mechanized farms and in areas of diversification, require a marked degree of skill, but it is probable that customary wage differentials due to skill favor the workers in factories.

[3] Revised employment estimates by the Bureau of Agricultural Economics and the National Research Project of the Works Progress Administration were summarized in the Monthly Labor Review, June 1939 (p. 1241): Farm Employment, 1909 to 1938. Revised figures of total wages, including board and other perquisites, are given in U. S. Department of Agriculture, The Cost of Hired Farm Labor, 1909–38 (preliminary), Washington, 1939.

[4] This and the following figures of average earnings include estimates of board and other perquisites, the estimates being made from the point of view, not of their value to the worker, but of their cost to the employer. Farmers are probably liberal in their estimates of cost, but the net result may be a slight underestimate of board and other perquisites from the point of view of their value to the worker. Figures of average earnings, whether for a year or for shorter periods, have the limitations of the basic data on employment and total wages, notably the inclusion of temporary, peak-season workers. However, in farm-wage statistics, the farm-wage rates and the data of special surveys afford checks which indicate a degree of adequacy warranting significant conclusions.

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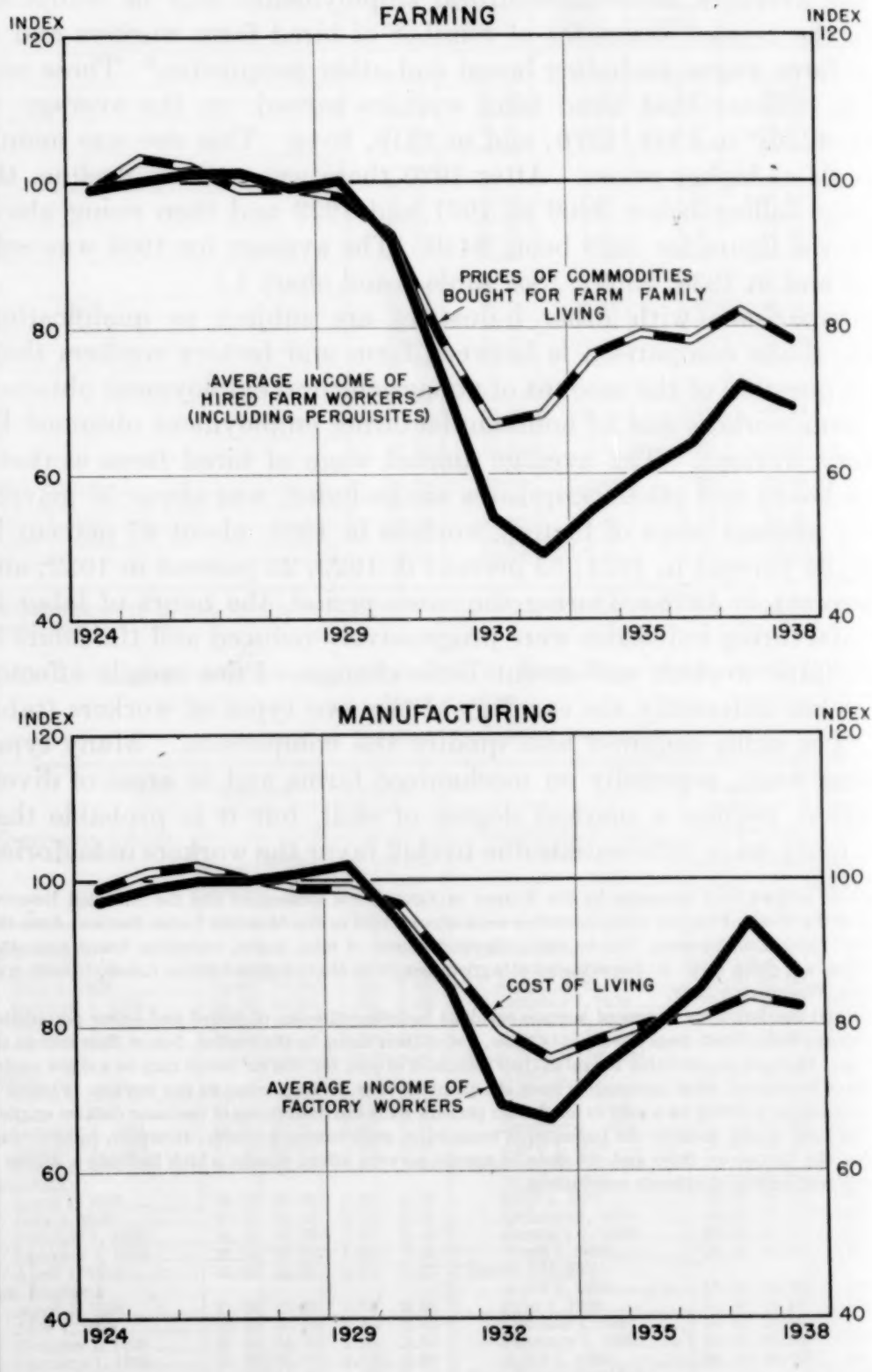
CHART I.

AVERAGE INCOMES OF FARM AND FACTORY WAGE EARNERS AND LIVING COSTS

AVERAGE 1924-29=100



UNITED STATES BUREAU OF LABOR STATISTICS

SOURCES: U.S. BUREAU OF LABOR STATISTICS AND U.S. DEPARTMENT OF AGRICULTURE

TABLE 3.—*Average Incomes of Farm and Factory Wage Earners and Indexes of Living Costs, 1909, 1914, and 1919 to 1938*

Year	Average income per—		Indexes of living costs (average 1924–29=100)	
	Hired farm worker [1]	Factory worker [2]	Commodities bought for farm family living [3]	Goods bought by urban wage earners (B. L. S. index)
1909	$256	$512		
1914	276	573	68	57.9
1919	544	1,148	129	100.5
1920	617	1,368	149	115.6
1921	400	1,154	109	103.1
1922	385	1,119	100	96.7
1923	421	1,239	101	98.4
1924	426	1,244	99	98.7
1925	433	1,267	103	101.2
1926	438	1,282	102	102.0
1927	434	1,286	99	100.1
1928	429	1,298	99	99.0
1929	430	1,302	98	98.9
1930	398	1,209	93	96.5
1931	315	1,085	78	88.1
1932	234	881	67	79.4
1933	212	854	68	75.4
1934	238	941	76	78.2
1935	259	1,014	79	80.3
1936	277	1,082	78	81.2
1937	311	1,205	82	83.8
1938	300	1,112	78	82.5

[1] Income includes board and other perquisites. The averages are computed from the revised estimates of total farm wages by the U. S. Department of Agriculture and the revised estimates of the average number of hired farm workers by the Department of Agriculture and the National Research Project of the U. S. Works Progress Administration.

[2] Factory wages after 1935 are adjusted on a preliminary basis to the 1937 Census of Manufactures.

[3] U. S. Department of Agriculture. Index Numbers of Prices Paid by Farmers for Commodities (preliminary). Washington, 1939. The index excludes services, which are included in the Bureau of Labor Statistics' cost-of-living index. The index of farm commodity prices is primarily applicable to farm operators. Residential building materials, for example, are included. The index is, nevertheless, the best available measure of changes in the cost of commodities bought by farm wage earners.

Income of Farm Operators

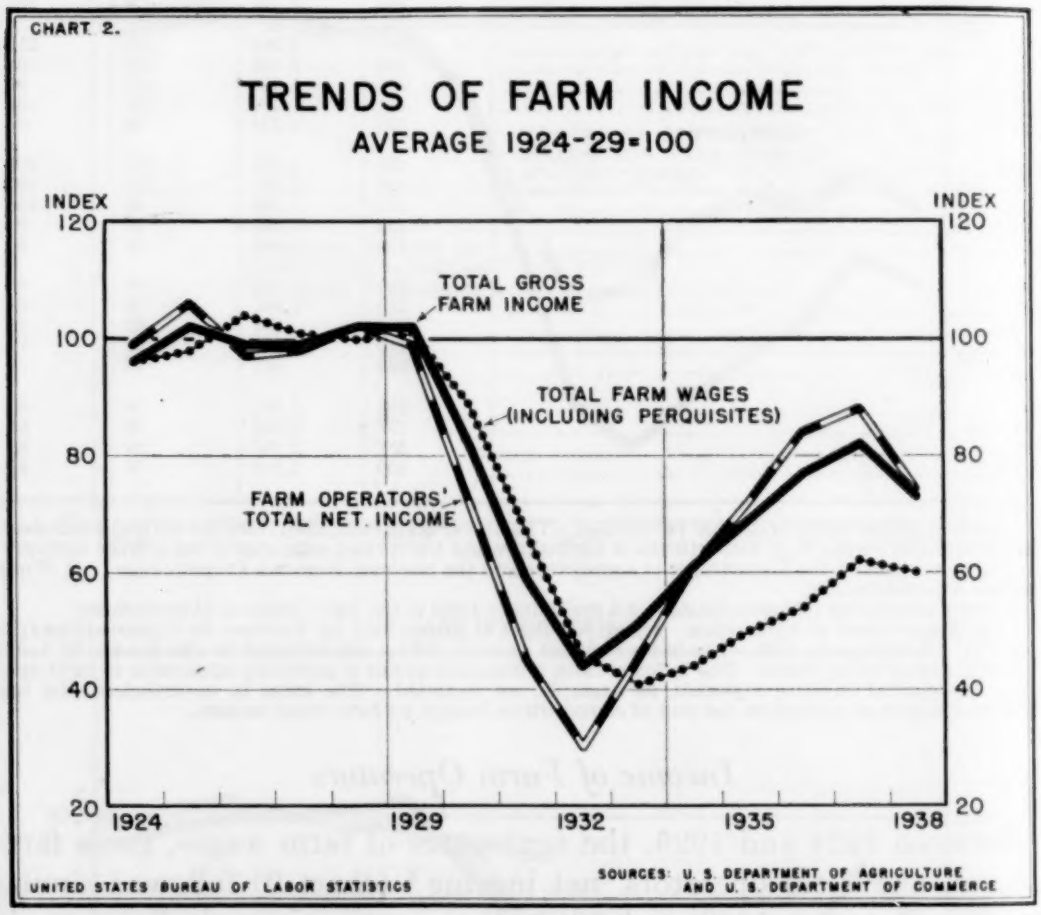
Between 1924 and 1929, the aggregates of farm wages, gross farm income, and farm operators' net income [5] (chart 2) followed similar trends. Between 1929 and 1932, the most serious decline was in operators' net income, but their net income rose most sharply after 1932. Total gross income and total wages followed similar trends until 1932, but after that year there was a decided lag in total wages. The income of farm operators includes their products which they retain for use on the farm. This form of income of farmers is measured

[5] Revised figures of gross farm income from 1925 to 1938 are given in U. S. Bureau of Agricultural Economics' press release on gross farm income, Washington, June 5, 1939 (mimeographed). The unrevised 1924 figure is here (chart 2) increased by 5 percent, the difference between the revised and unrevised figures for 1925 and 1926. Gross income includes (1) cash income from farm marketings, (2) products retained for consumption valued at average prices received by farmers for similar products when marketed, and (3) Government payments.

Figures of farm operators' total net income are undergoing revision by the Department of Agriculture and the Department of Commerce, but the data used (chart 2) include the main revisions. Operators' net income consists of gross income less current production costs, rent, interest, taxes, depreciation and obsolescence, and wages.

in terms of prices they ordinarily receive for such products when marketed and not in terms of prices they would have to pay in retail markets. In depression years, when prices were low and demands were slack and when many city workers turned to subsistence farming, these products formed a comparatively large part of the real income of farmers not adequately measured by the prices obtainable by farmers.

Total wages lagged between 1932 and 1938, and yet the number of hired farm workers was larger in 1938 than in 1932, whereas the number of family workers was smaller. Family workers are farm



operators (owners and tenants) and members of their families engaged in farm work. In 1932 the estimated average number of family workers was 8,571,000 (slightly abnormal as a result of depression), as compared to 8,216,000 in 1938. The estimated average number of hired farm workers in 1932 was 2,498,000 as compared to 2,529,000 in 1938.

Available statistics of farm employment classify tenants, sharecroppers, and subsistence farmers as farm operators. The large amount of subsistence farming, as distinguished from farming for the market, is indicated by the fact that nine-tenths of marketed farm commodities are produced on less than half of the farms of the country.[6] More than a million nonrelief farm operators' families (more

[6] U. S. Department of Agriculture. Report of Secretary of Agriculture, 1938 (p. 57). Washington, 1938.

CHART 3.
LEVELS OF FAMILY INCOME OF FARM OPERATORS
YEAR 1935-36
UNITED STATES
SOUTH
SOUTHERN WHITE SHARECROPPERS
SOUTHERN NEGRO SHARECROPPERS
PERCENTAGE OF FAMILIES
0 5 10 15 20 25
0 5 10 15 20 25 30 35
0 5 10 15 20 25 30 35 40 45 50
INCOME (DOLLARS)
UNDER 250
250 AND UNDER 500
500 AND UNDER 750
750 AND UNDER 1000
1000 AND UNDER 1500
1500 AND UNDER 2000
2000 AND UNDER 3000
3000 AND UNDER 5000
5000 AND OVER
SOURCE: U. S. NATIONAL RESOURCES COMMITTEE, CONSUMER INCOMES, PP. 25, 99, 100
UNITED STATES BUREAU OF LABOR STATISTICS

than one-sixth of the total) in the year 1935–36 received less than $500, including the estimated value of nonmonetary income such as products kept on the farm for family use.[7] In that year approximately 3 out of 5 nonrelief Negro sharecroppers' families earned less than $500. (See chart 3.) Thus, there is a basis in the economic status of many farm operators for classifying them with wage earners.

Farm operators, as described and classified by the Bureau of the Census, have low general levels of income, but about 13 percent of nonrelief farm operators' families in the year 1935–36 received $2,000 or more. The 1935 Census of Agriculture indicated that in January of that year hired workers were employed on only 14 percent of the farms of the country, and most farmers depend on their own family labor even during peak seasons.

Farm Wages as Shown by Special Surveys

The deficiency of income among hired farm workers is indicated broadly by the figures, given above, of the general averages of farm wages and the regional variations in farm wage rates. Special surveys, although fragmentary, furnish significant verification of the estimated general averages and provide illustrations of the levels of income that determine the purchasing power and living conditions of wage earners on farms.

A study of farm laborers in 11 counties in 1936 indicates that the highest average annual cash income per family in any of these counties was $572. In 4 of the counties the average was less than $200, and in one it fell as low as $127. Within each county there was a wide range above and below the average.[8] These figures include all forms of cash income. The proportions of hired workers in the several counties receiving pay for nonagricultural employment ranged from 8.2 percent in Placer County, Calif., to 37.3 percent in Fentress County, Tenn. The proportions of income from nonagricultural employment ranged from 4.9 percent in Karnes County, Tex., to 33.5 percent in Fentress County, Tenn. In two of the counties the income of dependents ranged from 0.2 to 13.8 percent of the total income. In all counties relief payments formed some part of the total income, the highest being 12.0 percent. (See chart 4.) Most of the workers included in these surveys were noncasual, nonmigratory farm workers with comparatively regular employment.

Another study of workers with comparatively steady jobs is a survey of farm labor conditions in Gloucester, Hunterdon, and Mon-

[7] U. S. National Resources Committee. Consumer Incomes in the United States: Their Distribution in 1935–36. Washington, 1938. This volume was based on surveys by the U. S. Bureau of Labor Statistics and U. S. Bureau of Home Economics, made in cooperation with the Works Progress Administration.

[8] Summarized from surveys of agricultural conditions in 11 counties, made by Tom Vasey and Josiah C. Folsom of the U. S. Department of Agriculture. Some of the information here used is from the summary by Prof. Paul C. Taylor in the second volume of Senate Hearings on Unemployment and Relief, pursuant to S. Res. 36, 75th Cong.

mouth Counties in New Jersey.[9] The survey excludes large numbers of casual workers who find employment in that region after the middle of May. Money wages from farm labor in 1935 averaged $431 for the 3 counties, the county averages ranging from $375 to $487. The average income from all sources was $443, or only $12 more than the average wage from farm labor alone. These figures represent the earnings of a selected group of 1,185 workers who received cash wages in 1935. Reports were obtained from 1,591 laborers, including some who were not actually at work at the time of the survey, and the average wage of this larger group in 1935 was $348. The earnings of white workers (more than four-fifths of the total number) averaged about 20 percent more than the earnings of Negroes. There were 52 members of laborers' families who reported some agricultural employment during the year, and 47 who reported some nonagricultural employment.

These figures of earnings do not include perquisites. In the 3 New Jersey counties, those who received board and also other perquisites counted the total value as approximately equal to their cash wages, but 34 percent of the workers received neither board nor other perquisites. A few hired workers, mostly older persons or persons with limited strength or ability, worked without money wages.

Earnings of Migratory Farm Workers

Information about the wages of migratory farm workers is fragmentary and the surveys that have been made have been predominantly in areas of comparatively high wages.

These studies suggest that adult men among the seasonal migrants in agriculture may average about $300 per year and that migrant families average perhaps $400 per year. Assuming an average of two workers and four to five persons per migrant family—approximately the family composition which has been observed in California—it may be estimated that the earnings of migrant agricultural families are equivalent to a wage of only about $200 per worker, and that they provide maintenance of less than $100 per year for each member of the average migrant family.[10]

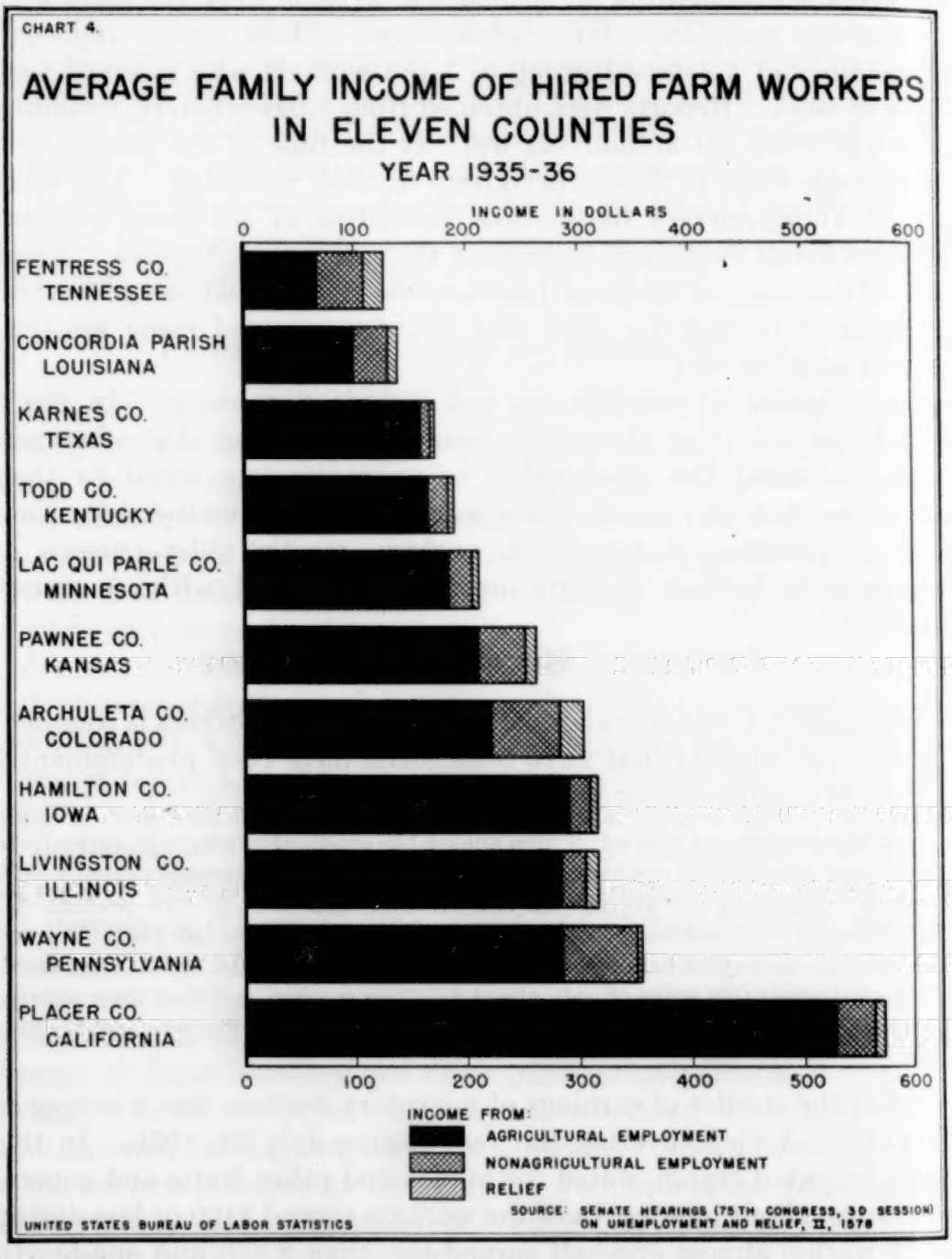
One of the studies of earnings of migratory workers was a survey in the Yakima Valley covering the year ending July 25, 1936. In this fertile, irrigated region, noted for apples and other fruits and general farm crops, about one-fourth of the workers earned $100 or less during the 52 weeks; almost one-half earned less than $200; and one-fourth earned more than $400. The family earnings of the entire group included in the study averaged $342; the earnings of families not on

[9] U. S. Bureau of Agricultural Economics. Farm Labor Conditions in Gloucester, Hunterdon, and Monmouth Counties, New Jersey, April–May 1936. By Josiah C. Folsom. Washington, 1939.

[10] Monthly Labor Review, July 1937 (pp. 3-16): A Survey of Labor Migration Between States, by N. A. Tolles. (Reprinted as Serial No. R. 592.)

relief averaged $466; and the earnings of families who had depended to any extent on relief averaged $269.[11]

A survey of family earnings of hand laborers in several of the sugar-beet areas in 1935 indicated that half of the families received less than



$340 for sugar-beet work during the year; 30 percent received less than $200; and 78 percent received less than $600. There was an average of 6.4 persons per family. In addition to the earnings mentioned, most of the families obtained some income from other sources, the median ranging in the different sugar-beet areas from $31 to $93.

[11] Monthly Labor Review, August 1937 (pp. 301–311): Seasonal Agricultural Labor in the Yakima Valley, by Paul H. Landis. (Reprinted as Serial No. R. 610.)

At some time during the year 63 percent of the families obtained either work relief or direct relief, the proportion of families receiving such aid ranging in the several sugar-beet areas from 37 to 97 percent. The cash income per family member, excluding relief, was $75 or less for half of the families.[12]

The California State Relief Administration obtained information regarding the family incomes of 775 farm workers from 1930 to 1935. These families had applied for aid during the off-season months of December and January, when employment opportunities are at a minimum. The information obtained indicated that the average family earnings ranged from $381 in 1930 to $289 in 1935. In 1930 half of the families earned less than $343, and in 1935 half earned less than $261. Only 18 of the families reported steady employment in 1935 for 1 or more members of the family, in 14 cases for 1 person, and in 4 cases for 2 or more persons. Only 13 families reported total family earnings in 1935 above $800.[13]

Farm Wages and Living Standards

The California State Relief Administration, in formulating budgets for relief families, estimated that at 1935 prices the amount required for a "minimum subsistence" budget for a family of the size of the average family in the sample surveyed (4.5 persons) was $780. This was the amount per family that would have been allowed to the group if they had found it necessary to depend wholly on relief. At 1935 prices, this relief budget allowed, for each period of 4 weeks, $36.08 for food, $15.50 for rent, $3.87 for utilities, $4.50 for clothing, and nothing for incidentals. The Heller Committee for Research in Social Economics at the University of California formulated a "health and decency" budget which, for families of the same size, provided for average expenditures of $972. The average amount obtained in wages by the families surveyed ($289) was less than 30 percent of the "health and decency" budget and 37 percent of the "minimum subsistence" or relief budget. (See chart 5.)

Some of the 775 families in this California survey were employed only during a small part of the year. In 1935 there were 428 members of this group who found work for one or more members of the family for 6 months or more. With few exceptions the family earnings even of this group were less than the "subsistence" budget of $780: 44.4 percent earned less than $300; 38.6 percent earned from $301 to $500; 11.2 percent earned from $501 to $700; and only 5.8 percent earned more than $700. (See chart 6.)

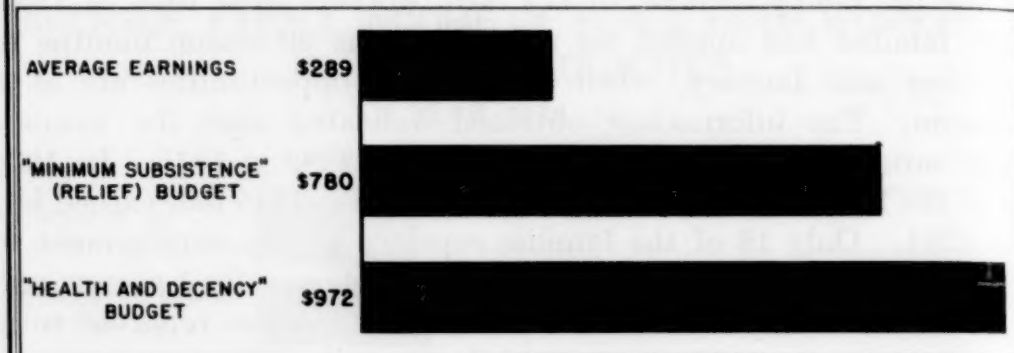
[12] Monthly Labor Review, February 1938 (pp. 322–340): Wages, Employment Conditions, and Welfare of Sugar-Beet Laborers, by Elizabeth S. Johnson. (Reprinted as Serial No. R. 703.)

[13] California State Relief Administration, Division of Special Surveys and Studies. Migratory Labor in California (pp. 109, 119–129). San Francisco, 1936. Part-time employment as a factor in low income is indicated in various studies, notably U. S. Farm Security Administration, A Study of 6,655 Migrant Households in California, 1938, San Francisco, 1939.

CHART 5

EARNINGS AND LIVING COSTS

AVERAGE FAMILY EARNINGS OF 775 CALIFORNIA HIRED FARM WORKERS APPLYING FOR RELIEF, AND ESTIMATED LIVING COSTS, 1935



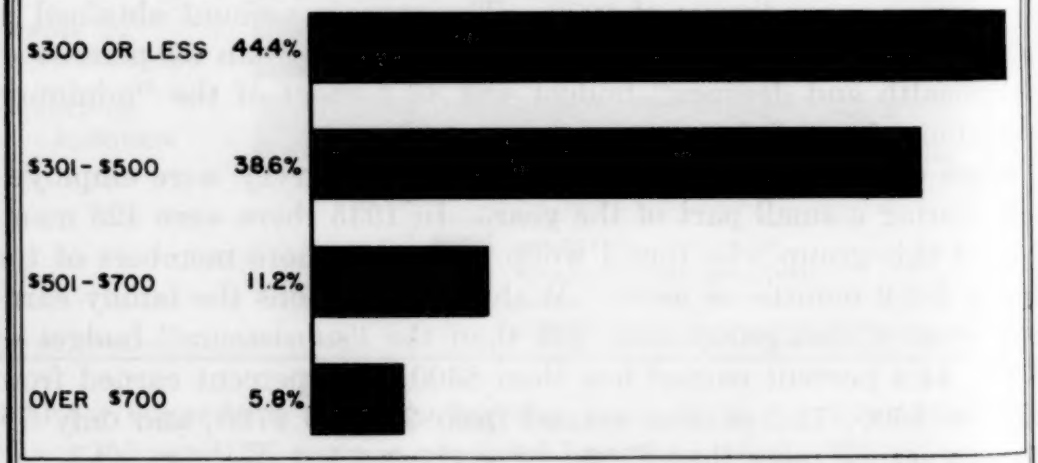
UNITED STATES BUREAU OF LABOR STATISTICS

SOURCE: STATE RELIEF ADMINISTRATION OF CALIFORNIA, MIGRATORY LABOR IN CALIFORNIA, P. 123

CHART 6.

FAMILY EARNINGS OF HIRED FARM WORKERS IN CALIFORNIA, 1935

PERCENTAGE DISTRIBUTION OF 428 RELIEF APPLICANTS EMPLOYED SIX MONTHS OR MORE



UNITED STATES BUREAU OF LABOR STATISTICS

SOURCE: STATE RELIEF ADMINISTRATION OF CALIFORNIA, MIGRATORY LABOR IN CALIFORNIA, PP. 126-127

The earnings of regularly employed farm workers ranged substantially above the earnings of migratory and casual workers. Average earnings in Placer County, Calif., from September 1935 to August 1936 were $572 (chart 4). With few exceptions these laborers were regular employees. Nonagricultural earnings were limited to a small proportion of the families. The Placer County average was the highest in the 11 counties previously mentioned. The average in the median county, Pawnee County, Kans., was substantially less than half of the average in Placer County. The farm wage rates computed by the Bureau of Agricultural Economics indicate that the wage rates for the country as a whole are approximately half as high as the California rates.

It was stated at the beginning of this article that a hired farm worker earned approximately $300 in 1938 if he received the 1938 average wage rate adjusted to include board and other perquisites and if he had the average amount of employment. If he was able to obtain employment throughout the year at the average rate, he earned about $500 and thus received for his year's work somewhat less than two-thirds of the California "minimum subsistence" relief budget or little more than half of the "health and decency" budget previously discussed.[14] The earnings of farm workers have a vital bearing not only on their own living conditions but also on their competition for the jobs of industrial workers and on the maintenance of market demands for the products of industrial labor.

[14] The terms "minimum subsistence" and "health and decency" are relative and more or less arbitrary. Many workers obviously "subsist" by means of incomes below these figures at prices no lower than California prices in 1935. It is equally apparent, however, that the amounts allowed by either of the budgets do not go beyond the maintenance of extremely modest standards of family living from the point of view of the well-being either of the family group or of the community.

OLD-AGE ASSISTANCE IN THE UNITED STATES, 1938

THE end of 1938 marked the completion of 3 years of benefit payments under the Social Security Act. During that period the number of old people being aided had risen by 60 percent, the yearly expenditures for their care had nearly tripled, and the average monthly payment per recipient had been increased from $15.73 to $19.30.

At the end of 1938, 224 of every 1,000 persons 65 years of age or older were being aided under the old-age assistance system. At the end of 1937 the ratio was 206 per thousand.

TABLE 1.—*Development of Old-Age Assistance in the United States, 1915 to 1938*

Year	Number of laws on statute books [1]	Number of laws in effect	Number of beneficiaries at end of year	Amount disbursed in benefits	Average monthly benefit	Percent of increase, as compared with previous year, in—		
						Beneficiaries	Total benefits	Average benefits
1915	1	1	42	$2,367	$4.70	----------	----------	----------
1923 [2]	2	2	518	49,595	7.98	----------	----------	----------
1924	2	2	723	107,648	12.41	39.6	117.1	69.8
1925	4	3	817	145,577	14.86	13.0	35.2	19.7
1926	5	3	1,165	229,980	16.46	42.6	58.0	10.8
1927	7	3	1,255	231,469	15.37	7.7	.6	[3] 6.6
1928	7	6	1,514	284,509	16.42	20.6	22.9	6.8
1930 [4]	13	9	10,648	2,138,441	16.73	603.3	651.6	.9
1931	18	16	76,663	16,251,794	19.01	620.0	660.0	13.6
1932	18	16	102,894	25,048,227	20.78	34.2	54.1	9.3
1933	29	17	115,549	26,167,117	19.25	12.3	4.5	[3] 7.4
1934	30	27	235,265	32,394,993	14.53	103.6	23.8	[3] 24.5
1935	41	32	408,502	65,001,665	15.57	73.6	100.7	7.2
1936 [5]	42	[6] 42	1,103,841	[7] 135,925,760	[8] 15.73	170.2	109.1	1.0
1937	50	[6] 50	1,579,896	[7] 310,459,757	[8] 18.86	43.1	128.4	19.9
1938	51	51	1,783,402	[7] 390,854,967	[8] 19.30	12.9	25.9	2.3

[1] Does not include in any year acts declared unconstitutional before going into effect.
[2] During the years 1916 to 1922 (not shown in the table) Alaska was the only jurisdiction paying old-age benefits; the average allowances paid there varied from $9.62 (in 1920) to $12.34 (in 1922).
[3] Decrease.
[4] No data collected for 1929.
[5] 11 months, February–December. Data cover only operations under Social Security Act. In addition Arizona paid benefits to about 2,500 pensioners, under a State-wide system; about 700 persons in Nevada received pensions, under a county-option law; and in Alaska about 500 persons received benefits under the Territorial act.
[6] Includes 1 State without an old-age-assistance act but with a "plan" approved by the Federal Social Security Board.
[7] Obligations incurred.
[8] Average of monthly averages.

The expansion of old-age assistance since 1915 is shown in the foregoing table. The data shown are based upon surveys by the Bureau of Labor Statistics for the period through 1935 and statistics

published by the Social Security Board for the years beginning with 1936.[1] The table reveals the gradual increase in average monthly benefits throughout the whole period, except for the reductions necessitated during the depression years of 1933 and 1934.

The effect of the Social Security Act is shown in the rapid extension of territorial coverage from 1935 to 1936 and 1937 and in the great expansion in number of beneficiaries in the same period. The rate of expansion slackened in 1938, but the total benefits paid in that year were 25.9 percent over those in 1937, the average payment per recipient having increased 2.3 percent and the total number of pensioners 12.9 percent.

The number of persons being cared for at the end of each of the 3 years 1935, 1937, and 1938 in each of the States, and the average paid per beneficiary in December 1938 are shown in table 2. In all cases the roll showed an increase from 1935 (the last year under the State systems) and 1937, but in eight States a decrease was shown from 1937 to 1938, probably resulting, in some cases, from deaths of recipients and from reexamination and cancelation of grants previously allowed.

TABLE 2.—*Number of Recipients of Old-Age Assistance, 1935, 1937, and 1938, and Average Monthly Benefit at end of 1938, by States*

State	Number of beneficiaries at end of—			Average per recipient December 1938	State	Number of beneficiaries at end of—			Average per recipient, December 1938
	1935 [1]	1937	1938			1935 [1]	1937	1938	
Alabama	[2]	13,968	15,897	$9.51	Montana	2,557	11,438	12,534	$20.48
Alaska	538	689	1,078	27.51	Nebraska	[5] 502	25,763	26,992	17.12
Arizona	2,223	5,116	6,811	26.10	Nevada	741	1,396	2,099	6.46
Arkansas	[3]	19,485	17,277	6.15	New Hampshire	2,060	3,592	4,002	23.08
California	23,685	97,943	125,270	32.43	New Jersey	14,635	25,372	27,332	19.32
Colorado	19,823	34,250	37,650	29.99	New Mexico	[3]	3,712	3,811	11.15
Connecticut	[2]	14,131	15,268	26.66	New York	57,878	102,926	110,445	24.18
Delaware	1,569	2,888	2,600	10.84	North Carolina	[3]	20,976	31,934	9.36
District of Columbia	[2]	2,963	3,259	25.40	North Dakota	[5] 4,334	7,247	7,851	17.38
Florida	[3]	22,893	34,130	13.84	Ohio	85,669	104,614	111,736	23.01
Georgia	[3]	22,287	35,770	8.76	Oklahoma	[2]	69,392	65,089	19.94
Hawaii	517	1,412	1,771	12.64	Oregon	7,182	12,963	18,846	21.30
Idaho	1,246	8,123	8,869	21.55	Pennsylvania	39,584	95,504	88,342	21.19
Illinois	[2]	121,897	124,388	18.52	Rhode Island	623	5,697	6,247	18.78
Indiana	30,312	41,887	53,842	16.53	South Carolina	[3]	13,260	23,160	7.40
Iowa	14,874	44,414	50,677	19.82	South Dakota	[3]	13,261	16,201	20.04
Kansas	[3]	13,554	22,143	19.62	Tennessee	[3]	13,393	22,324	13.23
Kentucky	251	35,046	44,493	8.73	Texas	[3]	113,703	113,230	13.84
Louisiana	[3]	24,132	28,251	10.26	Utah	1,287	11,589	13,368	20.45
Maine	[3]	42	11,968	20.71	Vermont	3,845	5,214	5,203	14.47
Maryland	1,400	16,250	17,337	17.51	Virginia	[3]		7,249	9.54
Massachusetts	25,303	64,893	74,982	28.56	Washington	11,513	35,515	37,610	22.10
Michigan	12,345	63,318	70,872	17.11	West Virginia	[2]	18,659	17,978	13.79
Minnesota	6,202	62,778	65,098	20.42	Wisconsin	3,879	37,816	43,659	20.78
Mississippi	14,973	15,576	18,788	6.92	Wyoming	952	2,842	3,006	21.62
Missouri	[4] 16,000	76,365	74,434	18.48					

[1] Last year under State plans.
[2] State had old-age pension or assistance law but no benefits paid in 1935.
[3] No law in effect.
[4] Approximate.
[5] June 1935.

[1] Social Security Board material is from Social Security Bulletin, issues of March and December 1938 and February, March, and April 1939, and Tabular Summary of Statistics of Public Assistance under the Social Security Act for the Calendar Year 1937 (Bureau of Research and Statistics Report No. 1).

CHARACTERISTICS OF RECIPIENTS OF OLD-AGE ASSISTANCE

THE Social Security Board recently analyzed reports on personal data—sex, marital status, relief status, living arrangements, physical condition, medical care, etc.—of more than a million persons accepted for old-age assistance in 1936–37 and 1937–38.[1] The Board found that the great majority had not been in receipt of public assistance immediately prior to being granted the old-age benefit. They were almost evenly divided as to sex, but single, widowed, and divorced persons were present in larger proportions than in the general aged population of the United States. Only 15 percent were in receipt of some medical care at the time the analysis was made, although 16.8 percent were either bedridden or were so infirm as to require considerable personal care.

Relief status.—The analysis disclosed that "a substantial portion of the aged persons who are being added to the old-age assistance rolls comprise a new group of public dependents." An applicant was considered to be receiving aid if he was receiving directly or as part of a family group any form of public aid (in public or private homes for aged, in hospitals, or through relief agencies, aid to blind, aid to dependent children, veterans' aid, etc.). Nearly 70 percent of those investigated for the year 1937–38 had received no public assistance within 30 days of the investigation, and 57.7 percent had had none within 2 years.

In 1937–38, 22 percent of all persons accepted for old-age assistance were receiving general relief and 3 percent were benefiting from WPA earnings. Relatively few of those accepted were being aided by private relief agencies or were receiving institutional care. Thus, approximately 1 percent had been in public or private homes for aged and less than 1 percent in hospitals and other institutions. Altogether, somewhat fewer than 6,000 persons accepted for old-age assistance in 1937–38 had been in almshouses. In this period Connecticut had the largest proportion of aged persons drawn from public homes for aged—29 percent. "Some of these old people are known to have been unable to adjust to an unprotected environment and to have returned later to the institutions from which they were drawn." In six States none of the persons accepted came from homes for aged.

Slightly over three-fourths (75.6 percent) of the persons accepted were living in households which received no other public assistance and 24.4 percent were in households receiving some aid. Of the latter group, 73.6 were in family groups benefiting by another grant of old-age assistance, 14.0 percent were in households receiving general relief, 7.6 percent in those with WPA earnings, and 6.8 in those aided by blind pensions, children's allowances, etc.

[1] Social Security Bulletin (Washington, D. C.), issues of December 1938 and February and March 1939.

Sex, marital status, and living arrangements.—Of the persons accepted for old-age assistance in 1937–38 the records for whom were analyzed, men formed 50.6 percent and women 49.4 percent—proportions almost identical with the incidence of the sexes in the general population 65 years of age and over (men 50.1 and women 49.9 percent). The relative proportions of pensioners by sex, however, varied considerably from State to State. In Indiana, Maine, Nevada, New Hampshire, New Jersey, New York, Wisconsin, and Wyoming, males accepted for old-age assistance considerably exceeded their proportionate representation in the general population, whereas they were greatly below the general average in Arkansas, Colorado, District of Columbia, New Mexico, North Carolina, South Carolina, and Utah. Marital status appeared to be a conditioning factor in this respect. According to the report, "single women are more likely to be cared for by friends and relatives than are single men, and married persons are less likely to become dependents than are single, widowed, or divorced persons."

In both 1936–37 and 1937–38, it appeared that about four-fifths of the persons accepted for old-age assistance were living in household groups, and about one-fifth were living alone. The report points out that inasmuch as "the primary objective of the old-age assistance program is to enable aged persons who are in need to live in their own homes or to have a measure of independence in the homes of relatives or of other persons," the above data are evidence that this objective has been achieved.

The Board believes that many of the persons living in households but not with relatives are in fact "boarding out," and expresses the opinion that some of these would be living in almshouses, in the absence of the old-age grant. Only about 1 percent were living in institutions. The Social Security Act allows the Federal Government to participate in grants to persons in private institutions but not in grants to persons in public institutions.

Medical care.—More than four-fifths (83.2 percent) of 585,877 persons for whom medical information was obtainable for 1937–38 were able to care for themselves, 14.2 percent were not bedridden but required considerable care, and 2.6 percent were bedridden. Of the total, 21.5 percent, and of those able to care for themselves, only some 15 percent, were receiving some medical care or supervision.

The report points out that the provision of more adequate medical care is one of the major problems yet to be solved. The Social Security Board recently approved the creation in State public-assistance agencies of pooled funds to provide medical care for old-age pensioners. Under this plan an allowance for medical care is made in the budget of the recipient, which is turned over by him to a pooled fund. From this fund the cost of medical care for all recipients is met. The Federal Government has not been able to participate in

payments made directly to physicians and hospitals, but at least 4 States made such payments from their own funds in 1937–38, and at least 12 States provide for hospitalization and medical care from general relief funds.

FRENCH UNEMPLOYMENT-INSURANCE LAWS

AID TO unemployed persons in France takes two forms—unemployment assistance and unemployment insurance. A decree of May 6, 1939,[1] codified and amended the many decrees and regulations which have been issued, with the purpose of remedying anomalies in the system and developing a flexible and vigorous employment policy for the unemployed.

Unemployment assistance, in which there is no element of insurance, dates from the establishment of a temporary national unemployment fund in August 1914 to meet an abnormal economic situation. In establishing it the Government did not intend to create a permanent institution, but the fund was continued under the pressure of circumstances and in recent years has been administered under an organic decree of December 28, 1926. Unemployment insurance was established by a decree of September 9, 1905, which provided that a Government subsidy should be paid to the voluntary unemployment-insurance funds maintained by the trade-unions and mutual-aid associations, on the basis of the financial assistance rendered by them. The two organic decrees of 1905 and 1926 have been amended by 26 decrees and a great number of regulations. Some of these have been repealed, but 65 others have been issued for the purpose of prolonging provisions having a temporary character.

The present law has three general purposes: To combine all the previous legislation in a single law, to revise certain provisions in the light of past experience and official studies, and to expand the employment service. Whatever the forms of the unemployment-assistance funds, whether communal, intercommunal, or Departmental, their establishment remains on a voluntary basis. In revising the legislation it was considered necessary to centralize all unemployment activities in a locality in a single fund. Payments from the public unemployment funds may be made only to French citizens or to nationals of States which have concluded a reciprocal unemployment treaty with France. The law establishes a means test, as it provides that the resources of the unemployed persons must be taken into consideration in making unemployment allowances. Hereafter the State subsidy will not be payable on allowances paid for Sundays and holidays. The law establishes a maximum limit for the payment of benefits when, for a specific occupation, the employ-

[1] Journal Officiel, Paris, May 7, 1939 (p. 5795).

ment offices are regularly receiving offers of employment. In order to insure the financial equilibrium of the insurance funds, the minimum number of members required has been increased. On the other hand, however, the State subsidy has been lowered appreciably. For the purpose of promoting reemployment, retraining centers will be opened, and bonuses will be paid by the State to employers hiring workers who have taken such courses. While previously, unemployed workers were not required to seek work outside their place of residence where they were registered on the unemployment lists, they are now required to accept any employment offered by a public employment office either in the locality in which they reside or in another locality. In the latter case, if the distance exceeds 25 kilometers they receive assistance in making the change.

Unemployment Assistance Funds

State assistance to persons who are unemployed because of lack of work is given under the form of subsidies to unemployment funds maintained by Departments, communes, or unions of communes. Persons considered as completely unemployed are those who work regularly for an employer and receive wages regularly, but who have lost their jobs and are unable to find work although capable of and willing to work. Partially unemployed workers are those who, because of lack of work, are employed for less than the normal working hours. All workers of French nationality who satisfy these conditions, and who because of lack of work are deprived of sufficient resources to support themselves and their families, are entitled to unemployment allowances from the funds in the communes in which they reside.

The municipal and Departmental governments in France are empowered to establish unemployment funds, entitled to the State subsidy, (1) for workers in commerce, industry, agriculture and the liberal professions, and for servants, in case of complete unemployment; (2) for commercial and industrial workers in case of partial unemployment; (3) for sailors in the merchant marine; (4) for dock workers; (5) and for artists. The State subsidy may not be paid to communal funds nor to sections of Departmental funds, if fewer than five unemployed workers are assisted. In order to be entitled to the subsidy, the public funds must conform to regulations approved by the Minister of Labor. Approval of such funds is subject to the existence in the commune of a Departmental employment office, or, in towns of less than 5,000 inhabitants, of a representative of such an office appointed by the mayor with the approval of the prefect. Each Departmental or municipal fund must have a control committee which may be the equipartisan committee of the municipal placement

office, or, lacking that, a committee consisting of the mayor or his representative and 2 representatives each of employers and employees, to authorize the allocation of allowances or their withdrawal.

CONDITIONS GOVERNING PAYMENT OF ALLOWANCES

Total Unemployment

Allowances are payable to workers who have been employed for at least 6 months prior to their becoming unemployed, in an occupation for which they received regular pay, and who have been released from all obligation to their last employer. They must also have resided in the commune for at least 3 months. If they do not fulfill the residence requirements, they may receive the unemployment allowance if the commune in which they formerly resided will assume the payment until they have completed the required period. Unemployed persons wishing to be registered with the unemployment fund must file a certificate from their last employers showing they have been employed for the required period, as well as the receipts showing that their social-insurance contributions have been paid. Seasonal workers may receive benefits if their unemployment is exceptional, for the season of the year in which it occurs, and if they can show that they were regularly employed at the same season in the preceding year. An unemployed person who wishes to register for unemployment allowance is subject to a waiting period fixed by the regulations of the fund, but which may not be less than 5 days from the date on which he registers for benefit. If an unemployed person who obtains work again becomes unemployed within 3 months, the second waiting period is 1 day after registration with the unemployment fund and the employment office.

A person is disqualified for benefit if he is unable to work because of age or incapacity; if he is unemployed because of a labor dispute at his place of employment; if without sufficient reason he has failed to reply to notices from the employment office; or if he has refused employment either in the locality in which he lives or elsewhere. Employment offered to unemployed workers should be renumerated at the normal rate for the occupation in the locality. Exclusion from benefit for refusal to accept employment may not be for less than 1 year. Other reasons for disqualification include fraud in securing benefits and excessive use of alcohol. In the latter case, the benefit of the increases for family charges are payable directly to the wife and to the children or to the children alone.

Unemployed workers receiving assistance are required, unless there is a valid reason why they cannot, to attend the occupational reeducation courses established or accepted by the State, even if this attendance necessitates their going to another place. In this case trans-

portation costs are paid by the educational centers and are included in the expenses subsidized by the State.

Seamen.—The provisions governing the payment of allowances to seamen are in general the same as for other workers, but the granting of allowances is under the control of the maritime section of the public employment office. Also, they are disqualified for benefit if they customarily engage in fishing part of the time or if they receive a pension from the registered seamen's retirement fund. No allowances may be paid such workers for days on which they work for pay outside their usual occupation. In this case the number of daily payments may not exceed in 1 week the number of days of unemployment minus 1.

Partial Unemployment

Allowances may be paid to workers who because of lack of work are employed not more than 1 week out of 2, or less than 3 days or 24 hours a week. Such partial unemployment must affect an establishment or part of an establishment employing at least 10 workers, and must affect all such workers except those engaged in indispensable maintenance or supervisory services. Partially unemployed workers must have been employed at regular wages in the establishment at least 4 weeks. Workers who receive any wage or bonus from the employer during the period of unemployment may not receive the allowances, nor may they receive payment if other work is done during their periods of unemployment, unless such payments are less than the allowance which might be received, in which case the difference between the two amounts is paid. Allowances are payable only if the establishment has been closed for 8 full days during the preceding 4 weeks at the minimum, or if it is closed alternate weeks after 1 full week's shut-down. If the establishment resumes full-time operation for more than 4 consecutive weeks, the same provision applies for a new period of partial unemployment. The number of daily allowances may not exceed for each week the number of days of unemployment minus 1. Provision is also made for the payment of allowances to workers in establishments in which the unemployment periods are rotated among the workers.

Dock workers.—Allowances may be paid to dock workers if they are unemployed more than 3 days or 6 half days a week, if they have presented themselves at least twice each day at the hiring halls. In no case may the number of daily allowances exceed in 1 week the number of days of unemployment minus 1.

Artists.—Nonsalaried artists (that is, workers in the plastic and graphic arts, actors, and musicians) may receive allowances if they have followed their profession for at least 1 year and it has been their sole means of support. They are required to register at their local

employment office and, if granted allowances, must report to the office at least every 2 weeks any amount they may have earned. If employment cannot be obtained in any of the professions, they are required to take any work which may be offered them by the public employment office, by the confederation of intellectual workers, or by the artists' syndicate.

AMOUNT AND PERIOD OF UNEMPLOYMENT ALLOWANCES

The maximum allowance for the unemployed head of a family is 8 francs per day; 4.50 francs for the wife, whether unemployed or not a worker; 4 francs for each dependent child under 14 years of age; 4.50 francs for each unemployed dependent between the ages of 14 and 25 if they are registered for work at the employment office or are taking a training course, or, if apprenticed, earn less than 6 francs a day; and 4.50 francs for unemployed persons over the age of 25 living in the household. The total amount paid to a household may not exceed 20.50 francs per day, but may be raised to 23 francs if there are 3 children under age in charge of the head of the household, 26 francs if there are 4, and 29 francs if there are 5 or more. The total amount of the allowances, however, may not exceed half the normal wages of the unemployed members of the family plus the family allowances. In the case of unemployed persons receiving benefits from a trade-union or mutual unemployment-insurance fund, the total allowance payable by the communes or Departments and the insurance fund may not exceed two-thirds of the wage plus the family allowances. The unemployment allowance, taken together with the other resources of every kind of the unemployed person and his household, may not exceed an amount fixed by the regulations. The dismissal allowance and the vacation allowance may not be paid together with the unemployment allowance.

The allowances are payable in cash, but the Minister of Labor may, exceptionally, permit the State subsidy to be paid for allowances in kind. In this case the regulations will determine the method of control so that the unemployed person cannot transfer or exchange the goods for other products.

If an unemployed worker occasionally finds work for a short period, he must report such work to the unemployment fund and a decision will be made whether or not the nature and importance of the work justifies his being retained on the unemployment list. The returns from such work in any case enter into the calculation of his resources.

Subject to special regulations which may be made by the funds, unemployment allowances may be paid indefinitely, but when in a commune or region and for a specific occupation the employment offices are constantly receiving offers of employment, the Minister of

Labor may limit the duration of allowances for the occupation and the locality.

When the unemployment funds have provided in their regulations for a limit for the payment of unemployment allowances, the public-welfare bureaus take over the aid to unemployed persons without resources and receive the State subsidy. In these cases the assistance is given only if the person is entirely without resources; if he cannot be assisted as aged, infirm, or incurable; if he is not in receipt of workmen's compensation; and if he is not suffering from an illness that hinders him temporarily from working. This assistance may be paid in cash or in kind; it may not exceed the amount of the unemployment allowances; and it may be paid only if the claimant can prove that he has answered notices of the public employment office and that the office has been unable to secure work for him.

Unemployed workers who accept employment more than 25 kilometers from their homes are given free transportation, supplementary allowances amounting to 1 month's allowance from the unemployment fund and 2 months' family allowances, free transportation for their family and household goods, and a rental allowance for the family until they join the worker, which must be within 3 months at the latest.

Unemployed workers who wish to establish themselves in a rural area are given transportation and a sum not to exceed 6 months' unemployment allowances if they can prove they can find lodging and work. Persons receiving such assistance cannot receive unemployment allowances again for one year.

Children (under 16 years of age) of unemployed workers may receive an increased allowance during a maximum period of 50 days during the school vacation period if they go to the vacation colonies. The allowance of 5.50 francs, instead of the regular allowance of 4 francs, is paid directly to the commune or organization maintaining the colony.

GOVERNMENTAL SUBSIDY

The State subsidy is payable only to public unemployment institutions whose establishment and functioning conform to the preceding regulations. A monthly statement of the operations of the office must be made to the Minister of Labor. The State subsidy is calculated according to the percentage of the population in the commune who are given unemployment assistance. The subsidy ranges from 60 percent for 10 unemployed persons assisted per 1,000 inhabitants, to 90 percent for over 30 per 1,000. For partially unemployed and for dock workers, the number of employees taken into account is determined by dividing the number of allowances by the number of workdays in the period.

The law provides that a State subsidy will be paid for the employment of French workers on repair work or small public works when such work is provided by the communes or Departments, if the work is authorized by the Minister of Labor.

Unemployment Insurance

Unemployment funds established by trade-unions or mutual-aid associations, and all professional or interprofessional associations having a civil personality, may, if they are maintained in part by the contributions of their members and satisfy the prescribed conditions, receive the State subsidy provided in the annual budget of the Minister of Labor. These funds may be formed for the purpose of compensating wage earners for total or partial unemployment and independent workers who are entirely without work. Groups which pay benefits for either total or partial unemployment or both must create a separate and distinct fund for each kind of unemployment, and the accounts must be kept entirely separate from other services provided by the group. The regulations of the fund must receive the approval of the Minister of Labor in order to receive the State subsidy. The fund must insure a free employment service for the members and may do this through an agreement with the public employment office.

CONDITIONS GOVERNING FUNDS

Total Unemployment

Funds entitled to the subsidy must have at least 300 active members, if they are made up of persons following the same occupation or similar or related occupations; 150 members, if they are local funds with the same type of membership and are subsidized by the communes or the departments; and 150 members in communes having less than 50,000 inhabitants, if they are local funds made up of persons following different occupations which were in existence July 1, 1936, and if the funds are subsidized by the communes or departments. The regulations of the fund must fix the contribution rate for active members covered by unemployment insurance, and the benefits are adjusted so that, taking account of the reserves of the fund, the State subsidy, and eventually the subsidy from the Departments and communes, the financial balance of the fund is assured.

The regulations of the funds must contain the following provisions: Each active member may belong to only one fund for each kind of benefit; benefit may not be paid until 12 months after joining the fund; an unemployed person is required to accept employment offered him by either the fund or the employment office to which the fund has given the placement and control of the unemployed; an unemployed person who has received or attempted to obtain benefits fraudulently

is excluded from the fund or deprived of his rights for a specified period.

The regulations of an insurance fund for full unemployment should provide that unemployed persons must sign the register provided by the fund at least 3 times a week during working hours.

Partial Unemployment

Funds providing insurance against partial unemployment may pay benefits only to regularly employed persons who are employed only part time because of lack of work. Benefits may be paid if they are employed only 1 week out of 2 or less than 3 days or 24 hours a week. There must be at least 10 workers in the establishment or department of an establishment in which the short time occurs, and all but maintenance and service employees must be affected. In order to receive the State subsidy the funds must be organized in the same way as the funds covering total unemployment. To receive benefits, partially unemployed workers are required to sign the unemployment register each day they are unemployed.

Independent Workers

Manual or intellectual workers who are not regularly in the service of a specified employer are considered as independent workers, as are also persons following a trade in which not more than two persons are employed outside of members of the family. This number may be increased to three if one is an articled apprentice. Funds organized by independent workers to cover complete lack of work may receive the State subsidy, if the number of members is equal to the requirement for funds for complete unemployment among wage earners, and if the other requirements as to contributions and benefits are met. In addition, independent workers are required to notify the employment office of the occupations in which they desire employment. They are required to accept any employment in line with these occupations or with their skill, which is offered by the employment office, or any work secured for them by the fund. Workers who receive benefits fraudulently, notably by failing to report any paid work performed by them, must repay the amount and may be deprived of the right to benefits for a specified period.

UNEMPLOYMENT BENEFITS

The State subsidy is calculated on the following maximum benefits: For unmarried men, heads of families, and for each unemployed member of a family belonging to the fund, the benefit is 9 francs a day; and for the wife of an unemployed worker and for each of his children or ascendants if these persons are dependent upon him and are not wage earners, 4.50 francs per day. The total daily maximum in one

family is 29 francs, exclusive of benefits paid to members of the family who are themselves members of an unemployment fund.

STATE SUBSIDY

The funds are not entitled to the State subsidy until they have been in operation one year. The subsidy is calculated on the total benefits paid by the fund less the amounts paid by the Departments and communes. The contributions by the active members of the fund during the half-year period must be equal to two-thirds of the benefits paid. Exceptionally, however, the amounts taken from the reserve may be considered as contributions. The State subsidy may not be more than 33 percent of the benefits which do not exceed the prescribed maximum after the subsidy from the commune or Department is deducted. This maximum is increased to 40 percent for funds operating in at least 3 Departments and having a minimum of 1,500 active members, as well as for the funds organized for independent workers. Advances on the subsidy may be made to the funds, under exceptional circumstances, if the request is accompanied by the required data on the operation of the fund. The credit allotted annually by law to the unemployment funds is apportioned on a semiannual basis by the Minister of Labor. The funds are required to furnish a statement on the administration of the fund within 6 weeks after the close of the half year, covering membership receipts, the number of unemployed, the number of days of unemployment, the number of persons indemnified for each day or each week of the half year, and if possible the amount of the reserve in the fund. A report must be sent by the funds to the prefect every 2 weeks giving the names and addresses of the persons receiving benefits and the amount of the benefits paid to each beneficiary. Failure to make these reports results in the suspension of payment of the subsidy.

Any fraud or attempted fraud on the part of a fund, particularly any attempt to make unemployed persons refund all or part of the indemnities entrusted to its charge, will result in the temporary withdrawal of the subsidy by ministerial decree, and in case of a second offense the withdrawal will be permanent. In case of irregularities in the payment of benefits the funds will be required to pay back the subsidies so used, and if they persist they may be deprived of all subsidy.

ADMINISTRATION OF UNEMPLOYMENT INSURANCE

The unemployment-funds committee which administers the system consists of one senator, one deputy, the Director of Labor (in the Ministry of Labor), the Director of Personnel and of Social Welfare (in the Ministry of Labor) or his delegate, the Director of the Budget or his delegate, a financial inspector, a bureau chief from the Labor Directorate of the Ministry of Labor, five representatives of the unem-

ployment-benefit funds, of whom one must represent the mutual-aid associations, and one person specially versed in unemployment and labor-market questions. The members are appointed for 2 years by the Minister of Labor.

Reeducation and Employment Agencies

State subsidies may be paid to agencies providing for the instruction of unemployed persons, if they are accepted by the Minister of Labor and approved by the reclassification committee. In order to receive approval, such agencies should be established by industrial establishments which have well-organized apprenticeship systems or by an occupational reeducation center for unemployed persons. These industrial schools must in general be open during the normal working hours of the establishment and must be separate from the regular workshops, but if this is not possible, workers taking the course may not participate in production. In industrial establishments workers who are authorized to take such courses must be replaced by unemployed persons supplied by the employment office. Workers taking the courses receive a wage from the head of the establishment which cannot be less than the rate fixed for the work by the collective agreement. The subsidies allotted towards the costs of the reeducation program are based on installation and equipment costs, salaries of teachers, etc., and include a payment equal to half the wages of the students, which may not exceed the minimum rate fixed by the collective agreement. The subsidies are paid quarterly, and the institutions must submit to the control of the agents designated by the Ministries of Finance, Labor, and Education.

Bonuses may be paid by the unemployment funds to employers hiring unemployed workers to replace workers taking industrial reeducation courses. These bonuses may not exceed, for each such worker employed, and for each day of work, the amount of the principal unemployment benefit plus half the payments for family charges which the worker would have received if he had continued to receive the allowance. These bonuses may be paid only when such workers are obtained through the public employment office and when the total number of workers and the number being trained exceeds the average number employed during the preceding quarter by as many units as the number admitted to training. These bonuses are included in the State subsidy paid to the unemployment funds.

Centers for occupational retraining which have been accepted by the Minister of Labor may receive the State subsidy. The expenses taken into consideration in the granting of the subsidy include costs of installation and machinery and tools; salaries of instructors; bonuses paid to the students at the close of training, which may not exceed 700 francs per person; insurance costs; purchasing of raw materials; costs

of transportation or lodging of students who have to leave home in order to take the training; an allowance of 2 francs per day and per student paid by the centers to ease the condition of the most necessitous students, in particular for the purchase of clothing other than work clothes; a supplementary allowance to students who do not receive the reduced unemployment allowance; and other necessary expenses not specified.

The subsidies are paid quarterly, and advances may be made to centers organized or developed under the present law. These centers may be established by public groups (departments, communes, public services, unemployment funds) or by institutions for technical education maintained by groups of employers or workers, or by occupational retraining associations. Such centers must be under the control of agents appointed by the ministries of labor, finances, national education, war, navy, and air. A committee of occupational reclassification under the presidency of the Minister of Labor consists of representatives of the different ministries concerned, of labor and employers' organizations, and the Superior Labor Council.

Unemployed persons admitted to a training center continue to receive the benefits from the public unemployment funds. In order to receive the allowance persons receiving training must report at least every 2 weeks that they have attended the center regularly and the amount of any pay they may have received. The allowances may be paid for 3 months, after which the control committee of the public unemployment fund will decide, for each unemployed worker, whether the allowances shall be continued, in whole or in part, or shall be discontinued. In case of continuance the question shall be reopened every 2 months. The committee should recommend the discontinuance of the allowance when the retraining of the worker is finished and he is capable of doing the work for which he has been trained, or if he has ceased attendance at the center because of lack of ability or poor work, or because of his conduct. Unemployed persons who cease attendance at the centers may receive the unemployment allowances again if they fulfill the requirements, and if no work can be found for them.

The law, which becomes effective July 1, 1939, nullifies 21 decrees issued between September 1905 and March 1939.

Labor Involved in Industrial Production

LABOR REQUIREMENTS IN PRODUCTION AND DISTRIBUTION OF SAND AND GRAVEL [1]

THE production and distribution of 100 tons of sand and gravel required 94.5 man-hours of labor. Of this, production labor took 32.8 percent, fuel and power 1.7 percent, and transportation 65.5 percent. Analysis by the Bureau of Labor Statistics of the records of 24 plants in this industry indicated that the amount of labor required in production varied widely according to the type of operation. The production-labor requirements in dry-pit and wet-pit operations were about the same, requiring 25.4 and 26.3 man-hours for 100 tons. Marine processing required nearly twice as much production labor—41.2 hours where the processing was done on the dredge and 57.9 hours where it was done on land.

As companion material to cement in concrete, sand and gravel finds an ever-widening utility in architectural and engineering developments such as building construction, river, harbor, and flood-control work, water and sewerage projects, reclamation work, and highway construction. In building construction, sands are also used for masonry mortar, and for plastering of all kinds. For highway building other than concrete, sand and gravel are used in bituminous and traffic bound road construction. Considerable quantities of gravel are also required for railway ballast.

The industry is characteristically a local one and deposits are widely distributed throughout the United States. Because of the low value of the product as well as its weight and bulk, transportation costs narrow the consuming market to areas adjacent to producing centers. As a result, the industry includes a great number of operators ranging from the small part-time or portable plant producer with an annual output of a few thousand tons to the large-scale and highly mechanized establishment producing more than a million tons yearly.

Deposits are of the bank, pit, and marine types. A bank deposit is one in which the elevation of the excavation floor is level with or above the surrounding land surface. A pit deposit is one lying wholly below the surrounding land surface; but pit deposits are also

[1] The detailed report, of which this article is a summary, was published as Serial No. R. 944.

divided into dry pits (in which the excavation floor is above the level of permanent ground water) and wet pits (in which the excavation floor is below the water level). Marine deposits are those forming the bed, bars, or small islands between the banks of a natural body of water.

Methods of production depend on the character and location of the deposit, its output and capacity, and whether or not the material needs subsequent treatment. In the early days of the industry, little or no processing was required. Today, however, practically all plants wash, screen, and size their products, and numerous establishments equip their plants with elaborate machinery for classification and purification in order to adhere to the rigid specifications, pertaining to size and quality, demanded by modern construction practice.

Production-Labor Requirements

Weighted average labor requirements in the establishments covered by the Bureau's survey were lowest in dry-pit plants, where 25.4 man-hours were needed in the production of 100 tons of sand and gravel, and were highest in marine operation where the processing was done on land, requiring 57.9 man-hours. In the data presented in table 1, excavation or dredging includes the labor required in the moving and disposing of the overburden (when necessary) and the labor involved in the operation of the excavation equipment. It covers the time needed to load the excavated material into cars, barges, or other haulage units and to transport and unload it at the processing plant or distribution yard, as well as the labor involved in changing and shifting railroad tracks in land plants.

TABLE 1.—*Man-Hours Required Per 100 Tons in the Production of Sand and Gravel, by Type of Operation, 1937*

Type of operation	Number of plants	Number of tons	Total		Dredging or excavation [1]		Plant operations		Repairs and maintenance		Overhead, sales, and supervision	
			Man-hours per 100 tons	Percent	Man-hours per 100 tons	Percent of total	Man-hours per 100 tons	Percent of total	Man-hours per 100 tons	Percent of total	Man-hours per 100 tons	Percent of total
Dry pit	11	3,173,000	25.4	100.0	5.4	21.2	11.1	43.7	4.9	19.3	4.0	15.8
Wet pit	6	2,400,000	26.3	100.0	2.9	11.0	9.3	35.4	8.1	30.8	6.0	22.8
Marine:												
Processing on dredge	4	2,435,000	41.2	100.0	21.0	50.9	11.7	28.4	2.7	6.6	5.8	14.1
Processing on land	3	863,000	57.9	100.0	17.3	29.9	19.6	33.8	14.8	25.6	6.2	10.7

[1] Includes man-hours required for stripping when necessary and hours required for transportation from point of excavation to processing plant or distribution yard.

PLANT VARIATIONS IN LABOR REQUIREMENTS

The different types of deposits in the industry present diversified problems of operation and result in large variations in labor requirements. Man-hours among the individual plants included in the several types of operation also show wide differences. The importance of transportation costs in the delivered price of the product affords a partial explanation of these variations. High-cost plants are often able to supply the demands of sizable local markets because expenses of transportation restrict shipments from lower-cost producers in other areas. The length of time a deposit has been worked is another factor in the range in man-hours. In land operations, for example, as excavation continues, pit costs are likely to be higher and the length of haul to the processing plant increased. Marketable material in marine operations after prolonged periods of dredging may be obtained only at greater distances from the plant or distribution yard. Differences in the size of plants, annual output, and type of equipment cause variations in labor requirements. The modern sand and gravel plant has machinery and equipment capable of producing tonnage far in excess of present demands and, normally, man-hours per ton are reduced as the rate of operation increases.

The range in total production-labor requirements in the individual plants using the various types of operation was as follows:

	Man-hours per 100 tons
Dry-pit plants	20. 0–47. 7
Wet-pit plants	18. 8–38. 5
Marine plants:	
Processing on dredge	38. 1–47. 8
Processing on land	36. 0–81. 2

Total Man-Hour Requirements Per 100 Tons

Other costs entering into the final cost of producing and distributing 100 tons of sand and gravel are the fuel and power used, and the cost of delivery to the site of construction.

Inasmuch as the production of sand and gravel is an extractive industry, no raw materials are required in production. However, during the process of production the industry consumes substantial quantities of fuel and power, including electrical energy purchased or manufactured, coal, fuel oil, gas, and gasoline. Supplies, such as lumber and timber products, wire screen, belting, rope, iron and steel products, lubricants, and explosives, are also required for plant repairs and improvements. It was not found feasible to estimate the employment created in the production and distribution of these supplies, because of the irregularity of purchases by individual firms and because of the difficulty of determining quantities of materials used for operating purposes. Nor was it practicable to estimate

employment created by the depreciation of plant, equipment, and machinery.

Fuel and power are required to operate the stripping and excavation equipment, to transport the material to the plant, and for plant operations and processing. In individual establishments little uniformity exists in the kind of fuel used in operations. The determination of the most suitable type of fuel is dependent upon the location of the plant, the type of operation, and the kind of equipment. Numerous marine plants use coal for the operation of their dredges; other firms have diesel-electric dredges consuming fuel oil. In land plants, electrical energy may be either purchased or manufactured. Equipment for transporting material from pit to plant in land plants may be run by gasoline, oil, or coal power.

The Census of Mines and Quarries for 1929 is the only available source showing total consumption of fuel and electric power in sand and gravel plants. A summary indicating the number of tons produced by firms in 1929 and the quantities of fuel consumed in production is presented in that census. Converting all fuels, with the exception of electrical energy generated by the reporting enterprises, to an equivalent bituminous-coal tonnage on the basis of heat units, it was ascertained that in the production of 100 tons of sand and gravel, fuel and power consumption was equivalent to 0.536 ton of bituminous coal. According to records of the National Bituminous Coal Commission, the labor necessary in mining a ton of bituminous coal in 1936 amounted to 1.52 hours per ton. A previous study by the Bureau of Labor Statistics showed that 1.529 hours were needed in the average haul to transport 1 ton of bituminous coal by rail. Consequently, labor required in mining and shipping a ton of bituminous coal amounted to 3.0 hours. Thus, the 0.536 ton of coal estimated to have been consumed in the production of 100 tons of sand and gravel required 1.6 hours of labor in mining and transportation.

Average labor requirements in production for the sand and gravel plants covered by the study and the estimate of man-hours involved in mining and transporting fuel consumed in operations totaled 32.6 hours per 100 tons. In placing sand and gravel at the site of construction, the major labor requirements, however, are those involved in delivery from the point of production to the job site. Delivery to the site may be effected by water, rail, or road.

Delivery to the site originating by truck required 44.1 hours per 100 tons; by rail with truck delivery from the rail siding to the site 73.4 hours; and by water with haulage by truck from the dock to the job 73.5 hours. The Bureau of Mines Mineral Yearbook, 1938, indicates that for 86.9 percent of the total tonnage of sand and gravel sold or used by commercial producers in 1937, 39.3 percent was shipped by truck; 47.4 percent, by rail; and 13.3 percent, by waterway. A

weighted average of the three methods of transportation based on the percentage of product hauled by each showed that 61.9 hours of labor were required in delivering 100 tons of sand and gravel to the construction job. With production labor and fuel consumption accounting for 32.6 hours, the production and distribution of 100 tons of sand and gravel required an average of 94.5 hours.

Application to Federal Construction Projects

On the basis of the labor required in 1937, it is estimated that 178,000,000 man-hours of labor were involved away from the site of construction in the production and distribution of $283,000,000 worth of sand and gravel used on the Federal construction program from January 1935 to March 1939. This is equivalent to furnishing full-time employment to approximately 89,000 men for 1 year on the basis of 2,000 hours per year. Nearly 105,000,000 tons of sand and gravel are estimated to have been used on Public Works Administration projects alone from July 1933 to March 1939. The production and distribution of this tonnage required nearly 99,000,000 man-hours of labor.

Labor in excavation, plant transportation, processing, overhead, and repairs represented 32.8 percent of the total indirect labor; fuel and power requirements were 1.7 percent; and transportation of sand and gravel from the plant to the site of construction amounted to 65.5 percent of the total hours.

Summarizing, it appears that the production and distribution of 100 tons of sand and gravel required a total of 94.5 man-hours, distributed among the various items as follows:

	Man-hours per 100 tons
Production labor (all types of operation)	[1] 31.0
Dry-pit operation	25.4
Wet-pit operation	26.3
Marine operation:	
Processing on dredge	41.2
Processing on land	57.9
Fuel and power	1.6
Haulage to construction site	61.9
Total labor requirements	94.5

[1] Average weighted according to percent of total output produced by each type of operation: Bank and dry-pit plants, 49 percent, wet-pit plants 25 percent, and marine plants 26 percent.

MEASURES TO PROMOTE JUVENILE EMPLOYMENT IN AUSTRALIA

THE Australian Commonwealth and State Governments are endeavoring to reduce juvenile unemployment by removing young persons from blind-alley employment and establishing training programs for those who are out of work. Consideration is also being given to raising the school-leaving age. A recent issue of Industrial and Labor Information contains excerpts from various reports touching on the subject. These are summarized below.[1]

As a result of the depression many young persons in Australia who entered blind-alley occupations were deprived of training and now find themselves either in jobs with no future, or unemployed because of having been displaced by younger workers upon coming of age. The Employment Council of New South Wales recently reported that an undue proportion of youths instead of adults were employed as laborers and process workers in industry. The proportion of juveniles, in some cases, was as high as 60 to 85 percent of the male workers. Adults were thus barred from suitable work, and chronic unemployment resulted for boys who on reaching the ages of 18 to 21 were replaced by younger employees. A tendency exists, according to the Premier of Queensland, to replace young workers who become eligible for higher wages under awards by juniors of 14 to 15, who are paid at the lowest authorized rates.

Teaching and training facilities are being extended, and adoption of vocational tests is advocated. In New South Wales, funds made available by the Commonwealth Government are being used to train apprentices. The work, commenced in February 1938, was extended to give training to 2,605 young men. Those found suitable were apprenticed in 136 different callings. Applicants must be approved by two councils and are subject to vocational tests to determine their suitability. In order to facilitate the training course the State Arbitration Act was amended to remove the age limit for apprenticeship, which had been 22 years, and to exempt apprentices from receipt of the basic wage at 21.

[1] International Labor Office. Industrial and Labor Information, Geneva, Apr. 24, 1939: Juvenile Unemployment in Australia, pp. 534–536.

The scheme adopted in Victoria differs from that in New South Wales in that unemployed youths are given intensive technical training before they enter into subsidized employment instead of after being employed. The Victorian Government established classes for 1,000 students who are being trained as blacksmiths, for the building trades, and for automobile and other types of work. Courses are given during the day and needy students are allowed small sums for living expenses. The efficiency of each student is assessed by a special committee. When the trainee is engaged he is paid the full journeyman's wage, and the Government contributes the difference between the sum his efficiency warrants and the current rate. Satisfactory results have been obtained. The plan helps to provide for boys who on leaving school at 14 had entered dead-end jobs, and becoming unemployed at 17 or 18 are unqualified for anything except casual work; it also provides for employees in some industries who are too old for certain jobs at 21.

In Victoria, forest camps for training young unemployed men in reforestation and the construction of forest roads have also been established. However, the Forestry Commission found a considerable reluctance on the part of workers to accept employment in the country, and therefore the plan has not been as successful as was anticipated.

Growing emphasis is being placed on securing a longer period of compulsory schooling. The Premier of New South Wales recently pointed out that the problem of juvenile unemployment is bound up with a number of other questions among which is that of raising the school-leaving age. In Queensland the Government is studying the advisability of raising the school-leaving age to 15 years, with a view to benefiting the health of young persons and providing opportunities for linking general and vocational education more closely in the extra year at school. It has also been suggested that introduction of suitable vocational education might reduce the proportion of unskilled labor and lessen the flow into clerical and similar callings.

In all these fields the need for cooperation between the Commonwealth and State Governments is stressed.

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Employment Conditions and Unemployment Relief

C. C. C. ACTIVITIES FOR INDIANS

ABOUT 77,000 Indians have been given employment for varying periods during the nearly 6 years the Indian Division of the Civilian Conservation Corps has been functioning.[1] These Indians were adults and worked for the most part on the land of their own reservations. The work done by them in the conservation and improvement of Indian lands not only has meant a present income, but will also in all likelihood bring returns in the future to living Indians and to future generations. Better health and the acquisition of occupational skills are other benefits gained from C. C. C. work. The existing data, though numerous, it is said, cannot adequately disclose the benefit to Indian morale and spirit.

Special regulations permit Indians working for the C. C. C. to live in their own homes if they wish, or in family camps and camps for single men, in the vicinity of the work project on which they are employed. As the cash allowance for C. C. C. enrollees is restricted to $30 a month, a schedule of 20 days' work a month at $1.50 a day was originally established for Indians; an additional 60 cents a day for subsistence was given to those living at home, making a total of $42 a month. This was later raised to $45 a month for them. The limit of 20 days' work a month was also later changed to five 8-hour days' work each week.

Under this system Indian families, as well as individuals, were encouraged to move close to the job. One of the first noticeable results was a decided improvement in physique. A gain of from 5 to 8 pounds in a short time was not uncommon.

Prior to the inauguration of Indian work in the C. C. C., Indians had for some years been on the verge of poverty as a result of the prolonged economic depression and a succession of excessively dry seasons in a broad belt extending from the Mississippi to the Colorado and from the Canadian border to Mexico. Within the first year of the C. C. C. program (1933–34) work was provided for an average of

[1] Data in this article are from U. S. Department of the Interior, Office of Indian Affairs, Indians at Work, Washington, April 1939: To the Indian Conservation Is a Living Thing, by Floyd W. LaRouche; U. S. Civilian Conservation Corps, Annual Report of the Director, year ended June 30, 1938, Washington, 1938.

10,000 Indians a month and at least 50,000 persons benefited. During the fiscal year 1938 approximately 9,500 Indians were given work under the C. C. C.

The conservation work done by the Indians in the C. C. C. has improved and rehabilitated their own lands. Some of their accomplishments along this line up to June 30, 1938, include the following: The water supply of ranges was increased by the development of 6,200 springs, small reservoirs, and water holes, the digging of 1,350 wells, with pumps, windmills, and pump houses, and the construction of 1,064 impounding dams and large reservoirs. Range lands were improved by the construction of 70,000 erosion-control water-spreading structures, 470 miles of stock driveways, 896 vehicle bridges and 51 stock bridges, and the elimination of 275,255 head of useless stock. Over 7,000 miles of truck trails, 2,500 miles of firebreaks, 6,300 miles of telephone lines, 2,250 miles of horse and stock trails, and 8,700 miles of fences were built. Additional protection was given to Indian forest lands by the erection of 49 houses for fire guards and 74 lookout towers, and by keeping 250 crews of trained men continuously on call for fire fighting. About 11 percent of the total man-days in the fiscal year 1938 was devoted to maintenance of improvements completed during 4 years of C. C. C. work.

Training has been a part of the program of the Indian Division of the C. C. C. from its inception. Indians have been taught various skills and how to operate machines, and have also been trained in leadership. At first very few Indians were in supervisory positions, but by March 1934 there were 455 Indians and 385 non-Indians in the supervisory personnel, and the preponderance of Indians was increasing. In the fiscal year 1938, notwithstanding a reduction in the program necessitating a lower personnel overhead, there were 438 Indians and 344 non-Indians employed in skilled, facilitating, and supervisory positions.

The success of the training given Indians in the C. C. C. is evidenced by the fact that Indians have gone from C. C. C. work into regular positions in the Indian Service, into commercial employment, and even into business for themselves. Higher pay than they had been accustomed to receive also proved the value of their training.

Instruction in first-aid and safety work and other safety precautions reduced the deaths from injury from 11 in 1937 to 6 in 1938, or 45.4 percent. Red Cross standard first-aid certificates are required of all supervisory employees, truck drivers, machine operators, etc., and approximately 50 percent of these employees have obtained such certificates and the remainder are receiving instruction therefor.

Almost 6 years' work and training in the C. C. C. have, without doubt, it is said, brought gains to the Indians. "The Indians wanted a chance to prove the things they could do with their hands and with their brains, and having had the opportunity, they have used it well."

FACTORS AFFECTING EMPLOYEE MORALE

A PROPER evaluation of work performed, an interesting job, and understanding and appreciation were ranked highest by employees in retail stores, in response to an inquiry to ascertain what they considered the most important factors in employer-employee relations. At the close of an industrial-relations clinic, held at the recent annual convention of the National Retail Dry Goods Association, the results were reported of a survey of opinion in 5 stores in which employees were given a list of items to rate.[1] A supplementary survey, to discover how more than 200 retail-store executives rated morale factors, was also conducted. The results of these surveys are presented in the accompanying table, which indicates a wide divergence between what the executives thought were the more important employee-morale factors and what the rank and file of employees themselves reported they desired most.

Ratings Given by Employees and by Company Executives to Employee-Morale Factors

Item	Rank assigned to specified items by—					
	Employees of Boggs & Buhl Co.		All employees in 4 other stores	Executives' opinions regarding—		
	Men	Women		Men	Women	Both sexes
Proper evaluation of work	2	5	1	6	6	7
Interesting work	1	6	2	4	3	3
Fair pay	3	4	3	2	1	2
Understanding and appreciation	5	1	4	5	5	5
Personal counsel from executives	7	2	5	8	8	8
Merit system of promotion	4	7	6	3	7	4
Good physical working conditions	8	3	7	7	4	6
Job security	6	8	8	1	2	1

The most outstanding disparity shown in the above table is on the matter of job security, which the executives believe ranked very high as a factor in employee morale and to which the employees themselves assigned very low ratings.

Employees tend to feel that other factors—understanding and appreciation, a chance to learn and to advance, and personal guidance from executives—collectively compose job security, or at least will work to insure the greatest possible degree of security. Security as an abstract principle is likely to mean only a rut. Furthermore, it is probable that retailing does not attract the type of person to whom security is a prime consideration. This is particularly true of the majority of women who go into stores and who by virtue of numbers weight the valuation very heavily.

The executives placed fair pay very close to security, whereas this item was ranked third in four stores, as noted above, and third and fourth, respectively, for men and women in the other store.

[1] Personnel Journal (New York), April 1939: Your Employee Wants You to Know Him.

This divergence may be explained by the fact that the grievances of employees in other matters often take the form of demands for higher wages, so that such demands seem to executives to be the most frequent problem with which they have to struggle.

Furthermore, although the amount of their earnings is important to workers, as it determines their standard of living, "dissatisfaction over pay," according to the report, "is likely to come not because a wage is considered 'unfair,' but because some other employee in the department is getting more."

SIZE AND COMPOSITION OF RURAL RELIEF FAMILIES

THE number of families in the United States approximated 30 million in 1930.[1] Of these, about 42 percent were reported as rural. In January 1935 almost 2,000,000 rural families received general relief grants, according to a survey made in that year in 138 counties representative of 9 agricultural regions of major importance throughout the country, and in 116 townships in New England. The data gathered in this investigation are presented in a monograph published in 1938 by the Federal Works Progress Administration, entitled "Rural Families on Relief," from which is taken the following information as to the size and composition of such families and the ages of their dependents.

The size and composition of the families studied are significant from various viewpoints. Large families or those with many dependents and few gainfully occupied or employable members may require relief more often and in more substantial amounts than smaller families or those with more members capable of earning their living. On the other hand, other conditions being equal, larger families have more opportunities than smaller units of having some wage-earning member. Furthermore, the matter of family solidarity in making for or eliminating the need of relief must be taken into consideration. This problem is especially applicable in the United States, which has had a long period of decline in size of families and change in family composition.

[1] "The term family, as it is used in the tabulation of the results of the 1930 Census, is limited in the main to what might be called private families, excluding the institutions and hotel or boarding-house groups which have been counted as families in prior censuses. A family may, therefore, be defined in general as a group of persons related either by blood or by marriage or adoption, who live together as one household, usually sharing the same table. Single persons living alone are counted as families, however, as are a few small groups of unrelated persons sharing the same living accommodations as 'partners.' Households reporting more than 10 lodgers are classified as boarding or lodging houses rather than as families. Two or more related persons occupying permanent quarters in a hotel, are counted as a private family rather than as a part of the hotel group." Bureau of the Census, Abstract of the Fifteenth Census of the United States, 1930, U. S. Department of Commerce, Washington, D. C., 1933, p. 401.

That the American family has become smaller and smaller since the founding of the country is a well-established fact. Furthermore, the American family varies in size according to a number of characteristics, one of which is its relation to agriculture and another of which is the amount of commercialization in the various areas. In 1930 the average size of all families in the United States was 3.40; whereas that for the urban population was 3.26, for the rural-nonfarm population 3.28, and for the rural-farm population 4.02.

The median size of agricultural families on relief was 4.6 members, as compared with a median of 4.0 members for nonagricultural relief families. The median size of the families of farm owners and tenants was 5, as compared to 4.5 for those of croppers and 4.0 for those of farm laborers.

TABLE 1.—*Average* [1] *Size of Rural Families Receiving General Relief, by Usual Occupation of Head, and Area, June 1935*

Usual occupation of head	All areas [2]	Eastern cotton	Western cotton	Appalachian-Ozark	Lake States cut-over	Hay and dairy	Corn Belt	Spring wheat	Winter wheat	Ranching
Total	4.0	3.7	3.8	4.3	3.4	3.8	3.8	4.4	3.9	3.5
Agriculture	4.6	4.4	4.5	5.0	4.4	4.8	4.3	4.8	4.2	4.2
Farm operator	4.9	4.6	4.6	5.1	5.3	5.4	4.5	5.0	4.6	4.4
Owner	5.0	4.4	4.5	5.4	4.5	5.1	4.4	5.6	4.5	4.4
Tenant	5.0	5.1	4.9	4.9	5.8	5.5	4.5	4.8	4.6	4.4
Cropper	4.5	4.4	4.3							
Farm laborer	4.0	4.1	4.3	4.0	2.8	4.0	4.1	3.1	3.5	3.9
Nonagriculture	4.0	3.9	3.8	4.3	3.7	4.1	3.9	4.3	3.8	3.8
No usual occupation, or nonworker	2.1	2.1	2.0	2.4	1.0	2.0	2.1	2.3	2.2	1.7

[1] Median.
[2] Exclusive of New England.

Only a small percentage of one-person households was reported for each occupational group except that in which the head was a nonworker or had no usual occupation; in that group the proportion reached 30.6 percent.

The proportion of the relief load which consisted of large families was found to be unusually heavy. Approximately 28 percent of all rural relief families contained six or more persons, whereas only 23.3 percent of the total rural families reported in the 1930 census had that many members. The relief families had a higher percentage of children and a smaller percentage of adults of working age than did the total families in the rural population.

White and Negro rural families on relief in the eastern and western cotton sections differed considerably in regard to the number of their dependents. Approximately 15 percent more of the white families had only dependents under 16 years of age, while approximately 10 percent more of the Negro families had only aged dependents. Furthermore, the proportion of Negro families with both young children and dependent old people was 5 percent above that of the white families. "This difference," it is stated, "may be largely due to the practice of many plantations * * * of splitting the Negro families

so as to keep the able-bodied members on the plantation and to place most of the disabled or aged members on relief."

As shown in the following tabulation, approximately 34 percent of 3,339 rural relief families having dependents both under 16 and over 64 years of age reported 4 or more such dependents; of the 37,975 families whose only dependents were under 16 years of age, 49.4 percent had 3 or more of these children; and of the 8,226 families reported as having only aged dependents, 73.5 percent had 1 such charge and 26.0 percent had 2 old people to care for.

TABLE 2.—*Number and Percent of Rural Relief Families Having Dependents in Specified Age Groups, June 1935* [1]

Area	Families with dependents—											
	Under 16 and over 64 years of age				Under 16 years of age only				65 years of age and over only			
	Number	Percent having—			Number	Percent having—			Number	Percent having—		
		2 dependents	3 dependents	4 or more dependents		1 dependent	2 dependents	3 or more dependents		1 dependent	2 dependents	3 or more dependents
All areas [2]	3,339	37.3	28.8	33.9	37,975	26.5	24.1	49.4	8,226	73.5	26.0	0.5
Eastern cotton	628	41.7	23.9	34.4	4,414	26.9	25.4	47.7	1,096	72.3	26.6	1.1
White	322	39.8	24.8	35.4	3,182	26.1	27.5	46.4	548	67.5	31.4	1.1
Negro	306	43.8	22.9	33.3	1,232	29.0	20.0	51.0	548	77.0	21.9	1.1
Western cotton	454	43.6	27.3	29.1	4,362	26.9	25.0	48.1	1,074	71.7	28.1	.2
White	284	44.3	29.6	26.1	3,460	27.7	25.7	46.6	654	69.4	30.3	.3
Negro	170	42.4	23.5	34.1	902	23.7	22.4	53.9	420	75.2	24.8	------
Appalachian-Ozark	1,066	30.2	32.3	37.5	11,232	24.8	23.0	52.2	1,728	72.0	27.4	.6
Lake States cut-over	138	36.3	33.3	30.4	1,966	28.6	24.0	47.4	594	82.2	17.8	------
Hay and dairy	344	39.6	26.7	33.7	5,224	26.4	23.5	50.1	1,234	72.0	27.7	.3
Corn Belt	332	36.7	27.1	36.2	4,354	28.2	26.4	45.4	1,038	73.4	25.8	.8
Spring wheat	94	34.0	29.8	36.2	2,318	24.3	19.8	55.9	292	73.3	26.7	------
Winter wheat	38	[3]	[3]	[3]	802	26.7	29.2	44.1	118	62.7	33.9	3.4
Ranching	60	53.3	30.0	16.7	1,098	27.1	24.6	48.3	310	81.3	18.7	------
New England	185	38.9	33.0	28.1	2,205	30.8	25.4	43.8	742	76.0	23.7	.3

[1] In relief surveys the term "dependents" includes all persons under 16 and over 64 years of age.
[2] 138 counties and 116 New England townships.
[3] Percent not computed on a base of fewer than 50 cases.

The question of dependency and relief is related principally, however, to the basic economic and cultural factors in any particular region. The predominant industries and occupations determine the extent to which the head of a family will be able to care for his dependents continuously, and the cultural traditions to a large extent determine the internal solidarity and cohesiveness of the family unit. This does not even consider such fundamental problems as sanitation, health, and disease, which may through debilitating conditions bring about the need for relief. Background factors of an economic, sociological, or even medical nature, when viewed in their full complexity, are agents which predetermine increased numbers of dependents on relief.

According to the report under review, "families in the South, including the Appalachian-Ozark area, are more likely to be large as a result of high birth rates." These families are more inclined to cling together, and hence, when the male head loses his job or is injured or dies, the whole family aggregation must have recourse to relief.

This explains to some extent why the percentage of families with no persons in the dependent-age groups should be lowest in the South with its strong rural traditions and highest in New England where the "newer mores of an industrialized and urbanized society" have almost submerged strong Yankee traditions.

UNDEREMPLOYMENT OF COTTON WEAVERS IN LANCASHIRE

OF 17,617 cotton weavers in 5 towns of Lancashire, England, nearly 60 percent experienced underemployment within a period of 6 weeks in 1938. Records for the period covered were kept in connection with a special census the results of which were summarized in a recent publication of Victoria University of Manchester.[1] In the weeks covered, the lowest rate of underemployment was 39 percent. Over 20 percent of the weavers were underemployed throughout the period during which they worked.

Underemployment exists when weavers are required to remain on duty for the full-time workweek but are unable to earn full-time wages under the piece-rate system because employers are not always able to provide them with a full complement of looms. Owing to the continued depression in the cotton industry since the World War, this condition has become chronic. The present study shows that when trade is at a low ebb, weavers must reckon with underemployment frequently instead of occasionally. The problem has existed, in varying degree, ever since individual weavers first began the operation of more than one loom, about a century ago. The degree to which the cotton weaver is affected is without counterpart in Great Britain except in one or two less important branches of textile manufacture.

Previous census enumerations had been made. In 1935 about 20 percent of the weavers were found to be underemployed in 2 consecutive weeks, but it is not known whether samples were the same in both weeks. In February 1936 a survey by the Amalgamated Weavers' Association covering 1 week also showed a percentage of 20. A later enumeration, in June 1937, covering 1 week, was made by the weavers' organization, and showed only 8.7 percent underemployment, owing to an improvement in trade.

Wage rates as of June 1937 were still effective at the time of the 1938 census, and therefore the figures in table 1, representing average weekly earnings of weavers in the earlier year, adequately reflect conditions in 1938, the period of the latest investigation.[2] This table

[1] Manchester (England) School of Economic and Social Studies, Vol. X, No. 1, 1939, pp. 62–76: Underemployment in Cotton Weaving: A Recent Wages Census, by E. M. Gray.

[2] See Monthly Labor Review, October 1938, for additional wage statistics relating to the cotton industry in Great Britain.

also shows the percentage distribution by sex of adult and minor weavers. Earnings are given separately for those employed under the ordinary system, that is operating five or less looms, and under the 6-loom system.

TABLE 1.—*Full-Time Weekly Earnings* [1] *of British Weavers, by Sex, Age, and System of Operation*

Sex and age	Percent of total weavers	Average weekly earnings			
		Ordinary system		6-loom system	
		s.	*d.*	*s.*	*d.*
Men 21 years of age and over	21.7	39	10	46	8
Women 21 years of age and over	71.3	35	5	43	6
Boys under 21 years of age	.6	31	--	43	3
Girls under 21 years of age	6.4	26	5	41	3

[1] The earnings shown in this and subsequent tables, unless otherwise stated, are net, after deduction of the weavers' unemployment- and health-insurance contributions but nothing else.

About 80 percent of the weavers are employed under the ordinary system and 15 percent in 6-loom operation. Men and women earn about the same amounts. This is a relatively high paid occupation for women but a low-paid one for men. Hourly earnings of male weavers were lower than those in 255 industries in 1937, including notoriously low-paid industries, having trade boards. In all, women in 38 industries had higher earnings than women weavers, but in 201 industries, women's earnings were lower. Boy weavers were generally higher paid than in other industries. Girl weavers were higher paid than in any other industry, owing in part to the system of classifying as girls all those under 21, instead of under 18 as in other industries.

In making the census of 1938, the sample was confined to weavers in Burnley, Blackburn, Preston, Nelson, and Colne—five towns in which most classes of cloth are woven. The period selected began with the week ending November 12, and included that ending December 17, 1938, as this was the earliest period after plans were made for the study which was not interrupted by holidays. Record cards were issued to 29,339 workers, of whom 17,617 returned information that was finally analyzed. It is estimated that this sample represented 35 percent of the weavers in the areas covered and 13 percent of the total in the industry. The sex and age distribution of those making returns was as follows, and resembles closely that for 1937 shown in table 1.

	Percent
All weavers included	100. 0
Men 21 years of age and over	26. 5
Women 21 years of age and over	68. 1
Boys under 21 years of age	. 4
Girls under 21 years of age	5. 0

Of the 17,617 weavers whose records were studied, 10,538 or 59.8 percent, were underemployed for 1 or more weeks, but the duration and severity varied widely.

Combining the statistics of underemployment for adults who worked in each of the 6 weeks covered by the census and for those who worked for shorter periods, the incidence of underemployment for all adults is given in table 2, in which the number of underemployed men and women and average weekly earnings are classified by the percent of time the various groups were underemployed in the 6-week census period of 1938.

TABLE 2.—*Percent of Underemployment Among Adult Weavers in a 6-Week Period, and Average Weekly Earnings*

Sex and item	Total	Percent of underemployment in 6-week period					
		0 to 20	20 to 33	33 to 50	50 to 66	66 to 83	100
Number of—							
Men	2,852	341	312	315	286	236	1,362
Women	7,223	975	938	881	669	536	3,224
Average weekly earnings of—	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Men	36 2	40 8	38 3	38 1	36 0	35 1	34 5
Women	32 6	35 8	35 1	34 3	32 11	31 9	30 3

Almost 48 percent of the total number of underemployed men were underemployed throughout the entire period during which they worked, as compared with 44.6 percent of the women.

Underemployed weavers have no claim to unemployment-insurance benefits, and there is no trade-union or other fund from which supplements may be made to low wages. In an effort to safeguard weavers against the effects of underemployment, the Amalgamated Weavers' Association has campaigned for a minimum wage for all persons in the occupation. This resulted in adoption in July 1935 of a guaranteed minimum weekly wage of 28s. (gross, i. e., before deductions are made for weaver's unemployment- and health-insurance contributions), for the relatively few weavers engaged on the 6-loom system. At the time the article here reviewed was published, the same organization was asking for a minimum wage of 35s. per week for all adult weavers, regardless of the number of looms operated, and the request was to be considered by a Conciliation Committee.[3] A special survey was therefore made in Burnley, where the 6-loom system began, to ascertain the number of adults earning less than 35s. gross in any week during the census period, and the cost of bringing weekly earnings up to this level for all weavers. Returns for 3,982 adults showed that 2,184 (54 percent) earned less than 35s. gross in 1 or more weeks, and

[3] On May 5 the Conciliation Committee agreed that "There shall be a fall-back wage of 66⅔ percent of the individual weaver's earnings averaged over 4 full weeks' production; but the fall-back wage payable shall not exceed a maximum of 33s., nor be less than 25s., for a weaver normally running 4 looms." (Manchester Guardian, May 6, 1939, p. 15.)

that the extra cost of paying such a minimum during the 6-week census period would have been £1,886 in Burnley alone, if the employers chose to retain all the weavers at work.

The author of the article raises a question as to whether the elimination of surplus weaving capacity under the pending cotton-industry bill might not relieve underemployment by the retirement of redundant equipment. The suggestion is also advanced that trade-board legislation might offer effective machinery for safeguarding the earnings of weavers.

Cooperation

COOPERATIVES IN FOREIGN COUNTRIES, 1935 TO 1937 [1]

MORE than 127 million members, in 61 countries, belonged to some kind of cooperative enterprise in the latest year for which statistics were available (1937 in most instances). More than half of them, however (67½ million), were in Germany, Italy, Latvia, and the Soviet Union, where cooperation was no longer accorded the standing of a free, democratic, and autonomous institution, and almost 5 million were in Austria, Czechoslovakia, and Spain where conditions are no longer favorable to the development of cooperatives. However, nearly 55 million members were in countries where voluntary and democratic organization is still relatively well assured.

Crippling or restricting legislation has been passed in the last few years even in some of the countries in which the cooperatives had been relatively free, and in others laws varying from mildly to extremely favorable have been enacted. Altogether, however, the cooperatives in the majority of countries at the end of 1937 had a better status than they had ever had before. In a number of countries cooperative associations made outstanding gains in number of members, value of goods and services provided, and improved economic condition.

Among the almost three-quarters of a million local cooperative societies known to exist, there is a range in size and activity from the London Consumers' Cooperative Society, with more than four-fifths of a million members, 998 retail stores, and vast resources, to those with only a few members and insignificant assets. These associations include such organizations as the cooperative kitchens in Japan; the arbitration cooperatives in British India for settling disputes among members; the 2,000 antimalaria societies in Bengal, India; the several hundred cooperative health associations in rural Japan and Yugoslavia; and the thousand-odd "better living cooperatives" in Punjab and United Provinces of India, which, although originally organized for the reduction, by voluntary agreement, of extravagant expenditures on weddings and funerals and other ceremonies (formerly an outstanding cause of rural debt), have since turned to health, and have dealt in increasing degree with rural sanitation.

[1] Prepared by Myrtle M. Selove, Bureau of Labor Statistics.

Fifty-three countries are known to have consumers' societies; 52 countries, credit societies; 39 countries, workers' productive organizations; and in 31 countries, varying numbers of people provide themselves with dwellings by cooperative effort. Nearly all of the countries have agricultural societies (for marketing produce and livestock, breeding livestock, dairying, irrigating, purchasing farm supplies and equipment, etc.). The electricity cooperatives are found in a number of countries, but in the United States these associations have greatly increased in the past few years with the stimulus of loans from the REA.

In short, almost every kind of goods or services is provided, in one place or another, through cooperative effort.

Almost half of the 127 million cooperative members, or nearly 3⅓ percent of the population of the countries in which they were found, belonged to consumers' cooperative associations, and these associations did a retail business of about 4 billion dollars in 1937. Retail associations in those countries for which information was available for the 3 years of 1935, 1936, and 1937, had increases in sales amounting to nearly 59 million dollars (1.9 percent) from 1935 to 1936; and to more than 277 million dollars (9.0 percent) from 1936 to 1937. The corresponding gains in sales of identical wholesales for the same period were 10.7 and 11.2 percent, respectively; the value of goods produced by wholesales showed increases of 18 percent and 12 percent. The relatively larger increases in cooperative wholesaling and cooperative production than in cooperative retail sales would seem to indicate that a growing number of cooperators who have already taken the first step toward filling their needs cooperatively are taking the second and third steps to cooperative wholesales and cooperative factories.

Many of the central federations in those countries which are important in cooperation and in which they have freedom of action are members of the International Cooperative Alliance. In 1937 that organization had members in 38 countries and included 71,500,000 cooperators, grouped in 125,000 societies. Of the individual members, 55,628,000 were in consumers' societies, 102,000 in independent productive organizations, 4,586,000 in agricultural societies, and 11,154,000 in credit societies.

The cooperative movements of certain countries (for example, Italy, Germany, Soviet Union), where the autonomy of the movement has been destroyed, no longer have affiliation with the International Cooperative Alliance. A similar loss of membership in that body may occur in regard to Austria, Czechoslovakia, and Spain.

Number and Membership of Cooperative Associations of All Types

A combined total of 675,260 societies of various types is shown in table 1. This total is by no means all-inclusive, for in a great number of countries statistics are obtainable only for associations affiliated

with the central organizations; in others, although it is known that cooperatives exist, in many instances there are no data as to the number of societies; and in still others there are no data for the last 3 or 4 years. Of the societies shown in this table, almost 45 percent are agricultural,[2] 27 percent are credit, and about 11 percent are consumers' societies.

TABLE 1.—*Number of Cooperative Associations of Specified Types, by Countries*

Country	Year	Societies of all types	Consumers' societies	Credit societies	Workers' productive societies	Housing and construction societies	Agricultural societies	Other types
Algeria	1936	564	1	310	----	----	253	(1)
Argentina	1936	549	70	42	[2] 32	(1)	248	157
	1937	636	79	46	[2] 32	5	323	151
Armenia	1936	314	112	41	----	----	161	----
Australia	1937	523	236	----	----	----	[3] 260	27
Austria	1937	5,368	220	[4] 2,169	[3] 24	[3] 33	[4] 2,892	[3] 30
Belgium	1936	3,363	356	205	55	123	440	2,184
	1937	3,435	360	203	56	124	446	2,246
	1938	3,482	360	203	57	125	454	2,283
Brazil	1935	615	22	[4] 245	[5] 24	----	[4] 44	[4] 280
	1937	912	27	303	[5] 24	----	338	220
Bulgaria	1935	5,738	161	2,077	661	[4] 409	[4] 308	2,117
	1936	6,058	154	2,125	[3] 661	[4] 409	[4] 308	2,401
Canada	1936	1,309	[6] 50	234	(1)	----	1,024	1
	1937	1,588	[7] 56	472	[8] 35	----	[9] 1,024	1
Ceylon	1936	1,008	21	945	----	----	----	42
	1937	1,299	[9] 21	1,205	----	----	----	73
Chile	1936	114	[10] 47	----	[4] 11	[4] 18	38	(1)
	1937	124	[10] 57	----	[4] 11	[4] 18	38	(1)
China	1935	26,997	[4] 547	17,570	----	----	4,143	4,737
	1936	37,308	299	20,637	----	----	5,550	10,822
Colombia	1935	25	10	12	(1)	----	3	----
	1936	47	20	21	(1)	----	5	----
Cyprus	1933	338	(1)	324	----	----	14	----
	1936	296	8	271	----	----	17	----
Czechoslovakia	1935	15,799	835	6,538	1,497	1,418	5,369	142
	1936	15,717	816	6,552	1,504	1,341	5,364	140
Denmark	1935	8,266	1,891	[4] 48	[4] 56	----	5,194	[4] 1,077
	1936	8,253	1,898	[4] 48	[4] 56	----	5,174	[4] 1,077
Egypt	1935	676	20	----	2	----	652	2
	1937	800	45	----	----	----	755	----
Estonia	1935	2,571	173	[4] 230	----	[4] 8	1,880	[4] 280
	1936	3,060	190	213	----	[4] 8	1,956	693
Federated Malay States	1935	282	----	241	1	----	3	[11] 37
	1936	340	2	287	----	----	5	[11] 46
	1937	406	4	352	----	----	5	[11] 45
Finland	1935	7,250	779	1,532	----	----	[12] 864	4,075
	1936	7,359	779	1,480	----	----	[12] 865	4,235
France	1935	69,527	1,064	6,232	627	[4] 278	[4] 16,790	[4] 44,536
	1936	83,672	1,200	6,148	510	[4] 278	31,000	[4] 44,536
	1937	83,798	1,450	5,798	602	[4] 278	[9] 31,000	[4] 44,536
Germany	1935	52,383	1,582	20,552	2,440	3,757	22,429	1,623
	1936	50,138	1,599	20,230	1,059	3,657	21,986	1,607
	1937	50,755	1,488	20,005	1,917	3,372	22,239	1,734
Great Britain	1935	3,876	1,098	----	[8] 46	351	1,267	[4] 1,114
	1936	3,863	1,087	----	[12] 46	356	1,260	[4] 1,114
	1937	3,773	1,094	----	[8] 43	356	1,166	[4] 1,114
Greece	1934	9,197	431	5,003	1,158	852	1,749	4
	1935	9,460	442	4,683	1,513	915	1,900	7
	1936	9,541	469	4,476	1,737	952	[3] 1,900	7
Guadeloupe	1934	119	----	29	1	----	75	14
Hungary	1934	2,980	1,527	1,010	15	----	428	(1)
	1935	3,108	1,489	1,009	15	----	595	(1)
	1936	3,240	1,480	1,008	16	----	736	(1)
Iceland	1935	68	11	----	----	3	46	8
	1936	96	39	----	----	[3] 3	[3] 46	[3] 8
India	1934	71,782	24	67,574	(1)	3	4,003	178
	1935	91,120	[4] 24	[4] 67,574	(1)	[4] 3	[4] 4,003	19,515
	1936	103,346	28	(14)	[15] 12	[16] 80	[17] 92,226	[18] 11,000
Irish Free State	1934	673	24	86	8	116	409	30
	1935	716	22	84	6	113	464	27
	1936	640	21	77	6	108	402	26
Italy	1935	14,637	3,465	2,530	1,194	1,873	4,716	859
	1936	14,928	3,465	[3] 2,530	[3] 1,194	[3] 1,873	5,007	[3] 859
	1937	13,629	2,938	[3] 2,530	1,241	[3] 1,873	4,188	[3] 859

See footnotes at end of table.

[3] Including agricultural credit societies in a few instances.

TABLE 1.—*Number of Cooperative Associations of Specified Types, by Countries*—Contd.

Country	Year	Societies of all types	Consumers' societies	Credit societies	Workers' productive societies	Housing and construction societies	Agricultural societies	Other types
Japan	1934	16,185	352	12,006	----------	----------	3,827	(1)
	1936	15,691	232	[19] 14,664	----------	----------	([20])	795
	1937	14,403	200	[19] 13,409	----------	----------	([20])	[9] 795
Korea	1936	756	----------	698	[21] 15	----------	[21] 43	----------
Latvia	1934	2,045	204	474	----------	----------	951	416
	1935	2,490	192	618	----------	----------	1,126	554
	1936	2,737	192	618	----------	----------	[3] 1,126	795
Lithuania	1935	1,337	165	466	----------	3	701	2
	1936	1,345	166	429	----------	3	746	1
	1937	1,373	175	448	----------	[9] 3	[9] 746	1
Luxemburg	1934	738	56	[3] 50	----------	----------	567	65
Madagascar	1935	365	(1)	49	(1)	(1)	316	----------
Martinique	1934	37	----------	37	----------	----------	----------	----------
Mexico	1934	4,081	(1)	1,581	----------	----------	[21] 2,500	(1)
	1935	3,020	698	[4] 1,581	----------	----------	462	279
	1937	3,322	1,000	[4] 1,581	----------	----------	[3] 462	[3] 279
Morocco	1934	85	----------	6	----------	----------	25	[3] 54
Netherlands	1934	3,428	413	1,292	(1)	144	1,513	66
	1935	3,570	406	1,294	145	140	1,513	72
Netherlands Indies	1934	249	25	210	3	----------	6	5
	1935	313	26	249	[4] 3	----------	30	[4] 5
	1936	332	18	275	[4] 3	----------	33	[4] 5
New Zealand	1934	200	20	----------	----------	----------	[21] 180	----------
	1936	222	21	----------	----------	----------	[12] 201	----------
Norway	1935	3,173	524	----------	(1)	[4] 10	2,637	2
	1936	2,709	549	----------	(1)	[4] 10	2,148	2
	1937	3,071	585	----------	(1)	[4] 10	2,474	2
Palestine	1935	773	40	172	130	127	282	23
	1936	852	47	175	145	153	306	26
	1937	1,006	55	237	144	177	360	33
Poland	1935	13,669	1,759	5,902	[4] 24	351	4,756	881
	1936	13,545	1,790	5,863	[4] 24	341	4,844	683
	1937	13,000	1,552	5,423	[4] 24	235	4,374	1,392
Portugal	1934	150	19	[3] 127	4	----------	----------	----------
Reunion	1934	28	----------	28	----------	----------	----------	----------
Rumania	1934	7,632	1,767	5,187	389	[22] 42	101	146
	1935	6,165	783	4,704	[4] 389	[22] 42	[4] 101	[4] 146
	1937	6,444	1,026	4,740	[4] 389	[22] 42	[4] 101	[4] 146
Siam	1935	439	----------	439	----------	----------	----------	----------
	1936	562	----------	562	----------	----------	----------	----------
	1937	770	----------	770	----------	----------	----------	----------
South Africa, Union of	1935	378	13	(1)	----------	----------	362	2
	1936	272	14	2	----------	----------	253	3
	1937	239	23	[9] 2	----------	----------	211	3
Soviet Union	1934	184,293	45,764	----------	18,363	42,102	[23] 78,064	(1)
Spain	1934	4,275	[24] 353	[23] 12	79	1,217	2,212	402
Straits Settlements	1935	101	----------	93	----------	----------	1	7
	1936	121	----------	112	----------	----------	1	8
	1937	131	----------	121	----------	----------	1	9
Sweden	1935	17,593	819	761	[4] 3	[2] 5,580	6,382	[3] 4,048
	1936	21,525	1,438	773	197	6,784	5,961	6,372
Switzerland	1935	12,004	873	633	[22] 57	257	5,479	4,705
	1936	12,037	878	649	[22] 57	254	5,521	4,670
	1937	12,047	879	658	[22] 57	250	5,591	4,612
Tanganyika	1934	27	(1)	(1)	(1)	(1)	27	(1)
Tunis	1936	936	(1)	102	(1)	(1)	[4] 810	24
Turkey	1934	679	(1)	670	(1)	(1)	9	(1)
United States	1936	26,893	3,600	5,440	24	50	10,500	7,279
Yugoslavia	1934	8,526	1,783	4,604	128	92	1,452	467
	1935	6,920	1,901	3,083	139	91	1,239	[4] 467
	1936	8,755	2,079	4,240	[3] 139	[3] 91	1,739	[4] 467

[1] No data.
[2] 1931.
[3] 1935.
[4] 1934.
[5] São Paulo only; 1933.
[6] Associations affiliated to the central union, including 6 buying clubs.
[7] Associations affiliated to the central union, including 11 buying clubs.
[8] Fishermen's only.
[9] 1936.
[10] Combined functions of consumers' and agricultural societies.
[11] General purpose.
[12] Dairy only.
[13] Fishermen's only, 1935.
[14] Included in "agricultural" and "nonagricultural."
[15] Cabmen's only.
[16] Bombay only.
[17] Includes rural credit societies.
[18] "Nonagricultural"; includes urban credit societies.
[19] Includes agricultural.
[20] Included with credit. [21] 1932. [22] 1933. [23] 1928. [24] 1,200 in 1937.

Although consumers' societies constitute only a little more than one-tenth of the total number of societies, they account for almost half (47.5 percent) of the membership. Of the remaining 52.5 percent, 15.2 percent are in credit associations, and 20.4 percent in agricultural organizations.

In Germany, Italy, and Japan, there has been a decrease in membership from year to year, and the societies that are left are so controlled and hampered that they can hardly be called cooperative, since they have in fact lost their autonomy and democracy. Likewise, the movement in Austria and Czechoslovakia since the German invasion presents an entirely different picture from that shown in the statistics for the years covered in this report; the same is true of the movement in Spain and China, where it had been growing rapidly even during the wars. There are no recent data for the Soviet Union, where, since the decree of September 5, 1935, only the rural societies remain as cooperatives, under at least the partial control of the members.

Table 2 shows the number of members in all types of cooperative associations, for the latest year for which information is available.

TABLE 2.—*Membership of Specified Types of Cooperative Societies, by Countries*

Country	Year	Societies of all types	Consumers' societies	Credit societies	Workers' productive societies	Housing and construction societies	Agricultural societies	Other types
Algeria	1936	64,450	3,000	34,300	----------	----------	[14] 1,500	[2] 23,650
Argentina	1935	159,000	56,603	[3] 4,502	[3] 10,768	(4)	25,200	61,927
	1936	254,063	69,852	19,037	[3] 10,768	(4)	39,565	114,841
Armenia	1936	216,402	152,440	37,057	----------	----------	26,905	----------
Australia	1937	243,602	142,000	----------	----------	----------	[5] 39,368	62,234
Austria	1937	1,053,421	300,000	[5] 275,421	(4)	[5] 68,000	[2] 410,000	(4)
Belgium	1935	815,193	346,568	(4)	5,742	(4)	[2] 243,734	(4)
	1937	968,625	500,000	(4)	[5] 5,742	(4)	[2] 243,734	(4)
Brazil	1935	109,148	26,214	[3] 1,534	(4)	----------	[3] 1,755	[2] 79,645
	1937	199,900	[5] 26,214	[2] 1,534	(4)	----------	25,938	146,214
Bulgaria	1935	951,855	86,107	410,225	141,115	[2] 12,430	[2] 70,119	231,859
	1936	978,171	84,640	419,416	[5] 141,115	[2] 12,430	[2] 70,119	250,451
Canada	1935	584,441	[6] 11,286	[7] 43,270	(4)	----------	366,885	[8] 163,000
	1936	624,770	[6] 14,435	[7] 49,890	(4)	----------	396,918	163,527
	1937	653,907	[6] 16,364	75,798	[9] 1,300	----------	[10] 396,918	[10] 163,527
Ceylon	1936	39,055	7,602	28,056	----------	----------	----------	3,397
	1937	52,139	[10] 7,602	41,140	----------	----------	----------	[10] 3,397
Chile	1934	85,000	38,148	----------	(4)	(4)	(4)	46,852
	1937	112,532	63,739	----------	(4)	(4)	1,941	[2] 46,852
China	1935	1,034,061	[2] 58,648	[2] 304,226	----------	----------	[2] 81,194	589,993
	1936	1,643,670	[2] 58,648	[2] 304,226	----------	----------	[2] 81,194	1,199,602
Colombia	1935	5,919	1,855	3,472	(4)	----------	592	----------
	1936	13,158	3,697	8,690	20	----------	751	----------
Cyprus	1933	17,351	(4)	16,633	----------	----------	718	----------
	1936	15,788	(4)	14,726	----------	----------	1,062	----------
Czechoslovakia	1934	3,101,086	632,500	1,000,000	(4)	[11] 151,472	100,300	1,216,814
	1936	3,112,986	644,400	[2] 1,000,000	(4)	[11] 151,472	[2] 100,300	[2] 1,216,814
Denmark	1935	1,779,343	424,355	[2] 20,042	(4)	----------	585,000	[2] 749,946
	1936	1,791,871	437,625	[2] 20,042	(4)	----------	584,258	[2] 749,946
Egypt	1935	64,607	(4)	----------	(4)	----------	(4)	(4)
	1937	80,000	5,000	----------	(4)	----------	75,000	(4)
Estonia	1934	201,085	35,000	92,775	----------	(4)	16,940	56,370
	1936	220,504	41,359	[2] 92,775	----------	(4)	30,000	[2] 56,370
Federated Malay States	1935	43,725	(4)	40,299	37	----------	49	3,340
	1936	54,972	283	49,873	----------	----------	86	4,730
	1937	76,129	358	70,350	----------	----------	84	5,337
Finland	1935	732,493	517,529	139,696	----------	----------	75,268	(4)
	1936	755,339	537,106	142,294	----------	----------	75,939	(4)
France	1935	4,496,474	1,698,359	[12] 575,872	[2] 30,600	[2] 22,000	850,000	1,319,643
	1936	4,558,615	1,600,000	[13] 586,372	[2] 30,600	[2] 22,000	1,000,000	[5] 1,319,643
Germany	1934	8,224,510	3,211,800	3,041,182	1,191	649,885	1,320,452	(4)
Great Britain	1935	7,784,781	7,414,376	----------	[13] 1,450	35,448	292,392	[2] 41,115
	1936	8,120,010	7,746,184	----------	[5] 1,450	37,261	294,000	[2] 41,115
	1937	8,458,895	8,084,990	----------	[13] 1,387	38,438	292,965	[2] 41,115

See footnotes at end of table.

TABLE 2.—*Membership of Specified Types of Cooperative Societies, by Countries*—Con.

Country	Year	Societies of all types	Consumers' societies	Credit societies	Workers' productive societies	Housing and construction societies	Agricultural societies	Other types
Greece	1935	220,112	(4)	[3] 95,000	[13] 112	(4)	125,000	
Guadeloupe	1934	6,062		2,642	(4)		3,420	(4)
Hungary	1934	1,251,204	595,000	383,000	[14] 17,712		65,492	[11] 190,000
	1935	1,337,107	627,693	403,560	[14] 17,712		98,142	[11] 190,000
	1936	1,358,014	630,000	423,852	3,700		110,462	[11] 190,000
Iceland	1935	8,000	7,684			(4)	(4)	316
	1936	9,150	8,684			(4)	(4)	466
	1937	12,466	12,000			(4)	(4)	[10] 466
India	1934	1,976,912	1,700	1,909,469	(4)	116	64,714	913
	1935	4,029,504	[3] 1,700	[3] 1,909,469	(4)	[3] 116	[3] 64,714	2,053,505
	1936	4,304,309	(15)	(15)	(16)	(15)	[17] 2,985,158	[16] 1,319,151
Irish Free State	1934	140,505	9,491	9,917	1,805	3,750	94,214	21,328
	1935	156,196	9,335	9,747	1,176	5,267	102,439	28,232
	1936	153,731	9,222	9,058	1,177	5,649	96,718	31,907
Italy	1935	1,322,152	775,000	310,146	69,000	71,000	53,300	43,706
	1937	1,129,480	590,417	[5] 310,146	60,911	[5] 71,000	[5] 53,300	[5] 43,706
Jamaica	1934	18,647					18,647	
Japan	1934	9,178,000	212,091	4,030,000			(4)	4,935,909
	1936	6,197,000	243,670	(4)			(4)	5,953,330
Korea	1936	1,408,678		1,408,678	(4)		(4)	
Latvia	1934	330,636	26,962	162,582			45,092	96,000
	1935	389,597	28,358	202,234			[3] 45,092	113,913
	1936	391,369	18,008	[5] 202,234			[3] 45,092	126,035
Lithuania	1935	178,797	21,332	121,000			[2] 29,912	[2] 6,553
	1937	235,396	[5] 21,332	[5] 121,000			85,000	8,064
Luxemburg	1934	60,671	(4)	6,321			52,296	2,054
Madagascar	1935	12,350		3,350	(4)	(4)	9,000	
Martinique	1934	1,441		1,441				
Mexico	1935	166,060	36,042	[2] 100,790			16,681	12,547
Morocco	1934	8,669		2,858			5,811	(4)
Netherlands	1934	562,582	312,235	224,842	(4)	(4)	25,505	
	1935	578,539	320,907	232,127	(4)	(4)	[2] 25,505	
Netherlands Indies	1934	18,606	1,838	14,889	39		256	1,584
New Zealand	1934	96,494	5,000				91,494	
Norway	1935	433,976	138,557		[2] 69,000	[2] 1,600	224,819	
	1936	438,767	148,748		[2] 69,000	[2] 1,600	219,419	
	1937	466,445	160,107		[2] 69,000	[2] 1,600	235,738	
Palestine	1935	197,437	4,067	73,576	2,044	9,143	24,685	84,922
	1936	223,796	5,005	83,334	2,615	10,168	29,477	93,197
	1937	248,793	6,070	91,884	2,947	11,324	31,813	104,755
Poland	1934	2,568,518	312,000	1,469,000	1,518	15,000	733,000	38,000
	1935	2,868,618	333,300	1,586,500	[2] 1,518	28,700	861,900	56,700
	1936	2,959,518	353,000	1,544,000	[2] 1,518	27,000	974,000	60,000
Portugal	1934	19,000	15,000	(4)	4,000			
Rumania	1934	1,717,464	257,907	1,125,343	57,179	(4)	[3] 259,810	17,225
	1935	1,399,493	100,000	965,279	[2] 57,179	(4)	[3] 259,810	[2] 17,225
	1937	1,414,594	118,000	962,380	[2] 57,179	(4)	[3] 259,810	[2] 17,225
Siam	1935	6,324		6,324				
	1936	8,103		8,103				
	1937	11,019		11,019				
South Africa, Union of	1935	86,316	13,473	(4)			69,335	3,508
	1936	84,815	13,619	1,077			64,756	5,363
	1937	91,692	15,299	[10] 1,077			68,196	7,120
Soviet Union	1935	57,870,400	41,000,000		[19] 2,002,000	3,360,000	[14] 11,508,100	
Spain	1934	408,646	[20] 84,944	(4)	3,432	56,418	208,286	55,566
Straits Settlements	1935	22,051		20,631			78	1,342
	1936	25,171		23,067			92	2,012
	1937	28,164		25,838			15	2,311
Sweden	1934	923,683	601,838	(4)	(4)	15,945	305,900	(4)
	1935	1,115,867	615,289	73,333	(4)	[2] 15,945	411,300	(4)
	1936	1,178,040	637,262	84,333	(4)	[2] 15,945	440,500	(4)
Switzerland	1934	780,470	402,535	55,246	(4)	15,008	307,681	(4)
Tanganyika	1934	18,554					18,554	
Tunis	1934	5,000					5,000	
Turkey	1934	65,110		63,936			1,174	
United States	1936	12,826,376	677,750	1,210,000	[21] 3,333	3,500	3,660,000	7,271,793
Uruguay	1935	18,000						18,000
Yugoslavia	1934	672,468	88,305	496,646	1,073	6,272	80,172	(4)
	1936	933,384	[3] 88,305	[3] 496,646	[3] 1,073	[3] 6,272	[3] 80,172	260,916

[1] 223 societies only. [2] 1934. [3] 1931. [4] No data. [5] 1935.
[6] Societies affiliated to union only. [7] Quebec only. [8] 1933.
[9] Fishermen's only; includes members of 1 cooperative in Seattle, Wash.
[10] 1936. [11] 1930. [12] Agricultural credit societies only. [13] Fishermen's only. [14] 1928.
[15] No division by kind of cooperative except for "agricultural" and "nonagricultural."
[16] 383 members of 12 cabmen's associations are included in "nonagricultural."
[17] "Agricultural" here includes rural credit, rural consumers', and all other rural.
[18] "Nonagricultural," which includes all urban associations. [19] 1930. [20] 833,000 in 1937. [21] June 1937.

Condition of Cooperative Movement in Individual Countries

TOTALITARIAN COUNTRIES

Austria.—Even before the seizure of Austria by Germany the attitude of the Austrian Government was that merely of toleration of distributive cooperatives, and private business had gained a number of points against them (such as the prohibition of the opening of new branches without the consent of the organization of private traders). The status of the cooperative movement there was considerably better than it was in Germany, however.

Now, of course, cooperation there is on the same level as in Germany. Prices are fixed by the price commissar and a State-controlled system of distribution providing for ration cards (for fats and eggs) came into effect January 1939. Jews must hereafter be excluded from membership of cooperatives and the "principle of leadership" must be included in the rules of the central union, thereby abolishing the principles of political and religious neutrality and self-administration. A tax on turn-over and a very high corporation tax have also been imposed.

Immediately after the seizure of the country by Germany, the German Reich appointed a commissioner to control the activities of the Austrian Cooperative Union and the wholesale society and through them the consumers' movement of the entire country.

Czechoslovakia.—Before the German invasion, the cooperative movement in Czechoslovakia was expanding with great rapidity. More than one-fifth of the entire population belonged to some kind of cooperative, and approximately 1 family in every 6 belonged to a consumers' cooperative association.

The consumers' movement had grown from 86 societies with 14,000 members in 1908 to 744 societies with half a million members in 1937. In the 30-year period the sales of the societies totaled 23 billion korun, and 300 million korun were returned to the members in patronage refunds. The number of cooperative employees increased in the same period from 609 to 15,000.

The cooperative wholesale (known, from the initials of its name, as V. D. P.) expanded its turn-over from 1 million korun in 1910 to 560 million korun in 1937. Nearly 40 percent of the goods sold came from its own 30 plants, nearly all of which showed increased production in 1937, and the underwear factory at Bamigen had to be expanded to cope with the growing demand. The wholesale carried on trade with all countries.

After the German invasion, a number of cooperative leaders fled. No information regarding the movement in that country has been received since the absorption of the remainder of Czechoslovakia. Up to that time the Czechoslovakian societies had lost nearly 500 shops, and 70,000 members, with assets of 70,430,726 korun.

The German portion of the cooperative movement in Czechoslovakia, however, had suffered even more severely. By the end of 1938 almost all of the societies belonging to the German Cooperative Union had been liquidated. Of 1,600 stores, only 17 remained at the end of 1938 and those were in process of liquidation. The central organizations and auditing union were also in dissolution and their officials were under notice to terminate their contracts of employment. In 1937 the affiliates of the German Union had assets of 259,000,000 korun; in 1938 their assets amounted to only 500,000 korun.

Germany.—In the last 2 years, the societies not affected by the liquidation drive (and which, in contrast to the societies dissolved, are usually described as "sound") had to close 404 of their shops. Since the beginning of 1933 the German consumers' movement has lost about 1,640,000 members—about 1,000,000 of these as a result of the liquidations under the law of May 21, 1935. That law provided that by December 1940 all savings of members must be returned to them; it thus abolished what is known as "loan capital" provided by members.

Before the National Socialists came into power, the share of consumers' cooperatives in the total German retail trade was estimated at about 5 percent. In 1937 it was between 1½ and 2 percent.

The German cooperative movement is no longer affiliated with the International Cooperative Alliance, as it does not fulfill the necessary democratic qualifications.

Italy.—In the early years of the Fascist régime the cooperatives suffered from the enmity of the State, and between 1921 and 1924 many societies were wrecked or subordinated to Fascist rule. In November 1925 the independence of the surviving societies was taken away. The attitude of the Government changed when, in 1927, the distributive organizations, through a State-controlled central organization, were transformed into Fascist organizations. Agricultural cooperation may even be said to enjoy Government favor. But all cooperatives must belong to the Ente Nationale Fascista della Cooperazione, the national corporate body for dealing with all kinds of cooperative matters. Leaders of the federations and of the Ente must be members of, or in good standing with, the Fascist Party. The Government appoints 2 of the 3 auditors of the Ente, which has the usual functions of a cooperative union. It audits the accounts of the cooperative societies and sees that the decisions of the Government are carried out. It is a semiofficial body; hence it extends its functions not only to cooperative societies but also to other institutions.

Latvia.—By the armed "putsch" of the night of May 15, 1934, Latvia became one of the totalitarian countries, since which time the

cooperative movement there has been fundamentally adapted to the spirit of the new ideology.

Shortly after the dictatorship was established, the Government issued decrees limiting the activities of cooperative societies and their unions during the emergency period. Those decrees also assumed power, "if it should be in the public interest, to dismiss members elected to all boards of management, auditing committees, and councils of cooperative societies and their unions, and select other persons from among the membership." Under a new law, enacted June 17, 1937, cooperatives must be licensed and must adopt specified new bylaws which lack democratic features. All decisions and actions of the general meeting of the cooperative council and the board of administration must be confirmed by the representative of the Ministry before they can be carried out.

Russia.—In 1935, the Government not only converted the urban cooperative societies of that country into State enterprises, but also took over the Centrosoyus, the cooperative wholesale.

The dissolution of the urban cooperative societies reduced the number of cooperative members in Russia from 73.5 million to 38.5 million and the number of cooperative stores from 201,000 to 109,000.

However, the rural societies are still independent and efforts are being made to make them more democratic in their constitution and procedure and to reduce the direct influence of local political leaders. It is reported that 21,000,000 members attended general meetings of cooperative societies in 1936—equivalent to an attendance of 70 percent of the membership.

In 1936, 96 percent of the fishermen in the Soviet Union were organized into 1,640 cooperatives. In 1935 the catch of all the cooperatives amounted to 8 million tons, representing more than 60 percent of the country's total production.

On January 1, 1937, there were in the U. S. S. R., 2,134 cooperatives formed by disabled persons. These had 201,000 members, as compared with 2,079 associations and 152,460 members on January 1, 1936. These disabled persons' cooperative associations are of the following types:

(1) Workers' productives, which generally have one or more joint workshops. More than 150 different trades in 15 branches of industrial production are practiced, the main branches being the leather industry and the making of knitted goods, small metal articles, toys, trimmings, ready-made clothing, etc.

(2) Cooperative societies which engage in the sale of articles produced by the societies of the first group, and of other articles.

(3) Labor contracting societies, which give direct service to customers, as cooperative photographers' shops, and the cooperative organizations for the staffs of restaurants, cloak rooms, etc.

(4) Of lesser importance, restaurants which exist mainly in connection with clubs, cinemas, theaters, etc.

When the first cooperative societies for disabled persons were formed some 15 years ago, the Commissariat for Social Assistance had to advance considerable sums for the organization of productive cooperatives and for providing a certain amount of working capital, but the cooperative societies have long ago become independent of any State financial assistance. Their own funds are now much in excess of the sums originally invested by the State.

SCANDINAVIAN COUNTRIES

Cooperation, both consumers' and agricultural, has apparently had more effect on the economic situation in the Scandinavian countries than in any of the other countries.

Denmark.—Denmark, with a total population of only 3,706,349 had 1,791,871 members of cooperative societies in 1936. There is considerable overlapping in membership, however, as the same person often is a member of several associations. The aggregate annual turn-over of all societies was estimated at 2 billion kroner.

Agricultural cooperatives handle 86 percent of the trade in butter, 17 percent of the trade in cattle, and 30 percent of the trade in fertilizer. Sixty-nine cooperative bacon factories take care of 84 percent of the total killing of pigs. The Danish Egg Export Society, with 800 branches and 50,000 members, handles more than one-fourth of the eggs produced in the country.

The cooperative wholesale (F. D. B.) has more than 20 factories, including establishments manufacturing margarine, paper, soap, bicycles, and shoes. Retail societies purchase from the wholesale 91 percent of the goods that it is able to supply. The average retail sales per member increased from 838 kroner in 1936 to 885 kroner in 1937.

Finland.—Cooperative retail associations transact almost one-third (approximately 30 percent) of the total retail business, and cooperative wholesales carry on about one-fourth of the total wholesale trade in the country. In 1937, 164 new shops and 11 cafes and restaurants were opened. Altogether, there were 2,159 retail stores at the end of 1937, and the combined net surplus for 1936 was estimated at about 46 million markkaa. Savings departments of consumers' societies in general recorded an enormous increase in deposits of over 57 million markkaa as compared with 1936. Approximately half of the members had savings accounts, the sum standing to their credit at the end of the year exceeding 349 million markkaa.

There are two central cooperative federations in Finland (known, from the initials of their names, as K. K. and Y. O. L.), each of which had its own wholesale (known as O. T. K. and S. O. K., respectively). The former federation is composed primarily of industrial workers and the latter primarily of farmers.

Almost all manufacturing dairies in Finland are cooperative, and agricultural supply societies carry on about 40 percent of the total

trade in feedstuffs and fertilizer and 60 percent of that in seeds. Farmers are recognizing the value of consumers' societies, not only as a market for their product, but as a source of supply. Their direct-trading relations with the K. K. societies are reported as becoming more and more cordial and close.

The fire- and life-insurance societies both made considerable advances in 1937. New life policies were issued to a total value of 186 million markkaa, the number of policies for the first time exceeding 21,000. The value of property insured against fire rose by 342 million markkaa to 2,388 million markkaa at the end of the year. The fire-insurance society during the year opened a new section for the insurance of automobiles.

Sweden.—It is estimated that cooperatives in Sweden save consumers 100,000,000 kronor per year. The latest move of the Swedish cooperatives against monopolies or cartels was in the linoleum field, where the cooperatives' threat to establish their own factory brought a 15-percent reduction in prices, or a saving of 3,000,000 kronor to the public. Cooperatives have already brought about reductions in the prices of electric-light bulbs, galoshes, tires, and margarine, by going into production themselves.

There are about 4,576 retail cooperative stores. Cooperative leaders in Sweden point out, however, that the expansion of cooperatives has not caused any decline in the number of retail merchants, which has doubled in the last 10 years.

Cooperatives carry on about 12 percent of the total retail trade in the country. The figure rises, however, to 20 percent in the merchandise lines in which cooperatives center their activities. Kooperativa Förbundet, the cooperative wholesale, in 10 years has expanded its turn-over by about 100 million kronor, and in about 20 years has increased its trade tenfold. This increased volume is due to a large extent to the expansion of cooperative production. The largest porcelain factory in Sweden, employing 800 workers and occupying a site of 20,000 acres, including workers' dwelling houses, was acquired in 1937.

The output of Luma, the electric-light-bulb factory, is over 2,000 lamps per day. Two Scottish engineers have been there, qualifying for work in the first international joint factory—the new Scottish-Swedish light-bulb plant at Shieldhall, Scotland.

Norway.—The cooperative movement in Norway is hampered by a law providing that no cooperative society may have branches in another municipality.

The consumers' cooperative societies have over 200 productive works, of which 105 are bakeries; the others include plants manufacturing tobacco products, coffee, soap, flour, shoes, electric lamps, and margarine.

A cooperative bank was established in 1936. There is also a cooperative life insurance society and a cooperative fire and general insurance society.

It is reported that the cooperatives charge "reasonable" prices and pay a dividend of 3 to 5 percent. Both cooperative membership and sales are increasing steadily each year.

THE UNITED KINGDOM

Great Britain.—In the cooperative movement of Great Britain the consumers' cooperatives are of outstanding importance. As far back as records are available, the membership of consumers' cooperative societies has increased steadily from year to year, 1921 being the only period in which there was a decline. About one-half of the total membership is concentrated in 81 societies, with a membership exceeding 20,000 each.

The trade of the societies has fluctuated to a much greater extent than the membership, owing to variations in prices and in the general economic condition of the country. A steady increase has been made, however, and only in very exceptional years has the quantity of goods handled declined. Although the money value of goods handled, in pounds, was still somewhat lower in 1936 than in the peak year of 1920, the actual quantity of goods handled in 1936 was nearly twice that of 1920. In 1937 the total trade went up to £251,393,047, only £2,765,097 below the 1920 level.

In table 3, data taken from the London Economist of June 11, 1938, show the number of shops of various kinds, their total trade in 1937, and the average weekly trade per member.

TABLE 3.—*Number of Shops of Consumers' Cooperatives in Great Britain and Total and Average Business per Member, 1937*

Type of shop	Number of shops	Total business in 1937		
		Amount	Average per week per member	
			s.	*d.*
Grocery, bread, etc., shops	10,660	£135,000,000	6	8
Meat markets	5,015	19,900,000	1	0
Greengrocery, etc., stores	1,249	3,900,000	0	22
Dairy-products stores	420	18,600,000	0	11
Dry-goods stores	2,101	18,400,000	0	11
Tailor shops	728	6,300,000	0	4
Shoe stores	1,236	5,900,000	0	3
Furniture, etc., stores	1,013	7,700,000	0	4
Drug stores	421	1,600,000	0	1

That report notes also 50 shops for optical services, 20 selling sports goods, 259 selling tobacco, and 144 hairdressing establishments. Coal is supplied through 700 societies, 532 provide laundry service, and 441 have funeral-furnishing departments. "Cooperators have established 24,000 shops in all, which is twice as many as any figure with which the movement has been previously credited. If 750,000 is accepted as the total number of shops in the country, it would appear that there are now 685,000 private, 40,000 multiple, and 24,000 cooperative shops, as well as 1,000 departmental stores."

Ireland.—The cooperative movement has suffered a serious reverse, in the discontinuance of the Dublin Society. Belfast is stated to be "the one great cooperative stronghold remaining in the whole of Ireland."

OTHER COUNTRIES WHERE THE MOVEMENT IS WELL ESTABLISHED

Belgium.—The cooperative movement, which has a membership of about 500,000 and handles about 10 percent of the retail trade of the country, has recently been strongly opposed by private traders, who have secured legal restrictions on certain forms of trading enterprise. Efforts have also been made to secure the imposition of high taxes, and there has even been a proposal to restrict the membership of cooperative societies to persons earning less than 24,000 francs per annum.

The cooperative wholesale, Société Générale Coopérative, between 1935 and 1937 increased its volume of sales 39.9 percent, which represents a considerable increase in trade, as the annual average index of wholesale prices in Belgium rose only by 17.9 percent. A large part of the goods distributed are made in its 73 productive establishments.

La Prévoyance Sociale, the cooperative insurance society, has a premium income of 55,000,000 francs, and is one of the largest insurance associations in Belgium, its policyholders forming 1 in every 11 of the population.

Bulgaria.—Under the law, there is permitted only one agricultural society per village, which thus performs the varied functions of marketing, purchasing, and provision of credit.

In 1935 the wholesale society, Napred, acquired two flour mills and in 1936 rented two others. In the autumn of 1938 it began the construction of a factory for the manufacture of rubber products; in the latter year, also, it joined with the beet growers' productive society, the Civil Service Insurance Society, and the People's Bank in an organization for the establishment of cooperative sugar factories, which is expected to control 70 percent of the country's production of sugar.

The Bulgarian movement has such a remarkable pattern that it is easy to find in it novel examples of cooperative enterprises. These include sugar production, forestry, and tobacco societies, pharma-

ceutical societies, the dentists' cooperative (with headquarters in Sofia and 10 branches in rural areas), societies for cattle breeding, wine production, arts and crafts, and productive societies in numerous fields.

Estonia.—Retail associations affiliated to the cooperative wholesale, E. T. K., have increased from 184 to 192 in the last 5 years, and their individual membership has risen from 34,000 to about 47,000. They have during the same period more than doubled their sales (from 20 million to 45 million krooni) and extended their retail trading network from 366 to 533 shops.

The wholesale, founded in 1917, has developed in 20 years into the largest commercial and industrial enterprise in Estonia. Its annual turn-over of 29.1 million krooni in 1937 represented an increase of 19 percent over 1936, and was nearly double the value of 4 years previous.

E. T. K. is not only the central wholesale and productive organization, but also an educational and advisory union for its affiliated societies. It has its own cooperative college, which provided training courses for 316 students during the year. It assists local societies with propaganda work, and has organized a central committee, composed of representatives of women's guilds and experts in domestic economy, to promote the education of the woman members.

Hungary.—The General Consumers' Society (A. F. S. Z.), established in 1904, had 72,215 members in 1937 and a turn-over of 15,567,845 pengös; its own productions were valued at 4,890,000 pengös. Its 985 employees are all working under collective agreements.

In October 1938, Hangya (the cooperative union and wholesale) decided to establish a memorial to the late Dr. Elemer de Balogh, its former president. The first step will be the creation of a model cooperative establishment in a village near the capital, which will serve as an ideal society and will have a headquarters building large enough to hold a cooperative consumers' store, living quarters for the shop manager, a lecture and board room, a library and reading room for the members, besides large and well-equipped storage accommodation for all the commodities that the farmers produce for the market. There will also be a separate room for the local Cooperative Women's Association, where the women will be taught domestic science and needlework.

Iceland.—An amendment to the Cooperative Societies Act, passed in 1937, provided for limited liability and made it easier for societies to amalgamate. Already societies in the capital have taken advantage of the latter provision.

Beginning 10 years ago the cooperatives in Iceland have built up a trade in frozen lamb amounting to over 2,000 tons annually. Twelve freezing plants are owned by the societies affiliated to S. I. S. (the cooperative wholesale).

India.—India's cooperatives are mainly "general purpose," "thrift," and agricultural. Consumers' cooperatives have not gained much ground there.

Cabmen's cooperatives are a new phase of the movement in India, where there are 12 such associations with 383 cabmen as members. The main purpose of these associations is to supply credit and promote thrift. Each member has to buy 12 shares at 10 rupees each, payable over 10 years at the rate of 1 rupee each month; each member must also contribute toward a deposit fund. Loans are made only for the specific purpose of maintenance of the cab.

Lithuania.—In 1937 a Chamber of Commerce, Industry, and Trade was established, with a specific representation of nine cooperative delegates.

Mexico.—The Mexican Government is actively encouraging the growth of cooperative associations. It has established a special Department of Cooperation, under the Ministry of National Economy, to assist them in organization, auditing, educational work, etc., and also an advisory technical council, consisting of one representative from every type of cooperative society in the country, to study all matters relating to cooperative organizations. The 6-year plan for the development of economic life in Mexico included provision for the encouragement of cooperative societies and, in accordance with the procedure indicated in the plan, the Secretariat of National Economy has made every effort to assist the development of cooperative societies, as a measure tending toward economic independence of the working classes. The Federal Ministry of Finance has issued decrees exempting them from the payment of numerous taxes, and the authorities of various States of the Republic have made regulations encouraging their growth.

Cooperative societies are organized to form 18 federations for the purpose of solidarity and greater power. The federations are members of the National League of Cooperative Societies, as are also individual societies not affiliated to any federation. According to an official of the league, the majority of all societies in Mexico belong to the league.

The Ministry of Public Education issued a decree on April 1, 1937, requiring that students' cooperatives be established in every school under the jurisdiction of the Ministry. The purpose of these societies is "to prove to the students and teachers the advantages of working together, so that they will be ready to take part in the larger cooperative movement outside the school's walls when they graduate." All pupils and teachers must belong to the society.

New Zealand.—The most important section of the cooperative movement in New Zealand is agricultural. Many of the marketing societies are developing purchasing sections and actual consumers' societies.

Steps have been taken toward the formation of a cooperative wholesale society. A women's guild was established in 1936.

Netherlands.—The membership figure shows a slight decline, which can be partially explained by the revision of membership lists, but also there has been a check to the growth of the movement.

The movement has developed slowly in recent years, owing to late general recovery from economic depression. A law of 1936, which restricted new associations on grounds of credit worthiness and technical knowledge of the trade, did little damage, but a new law passed in 1938 is much more serious. New enterprises or the expansion of existing businesses now must have the consent of a Government commission. The National Cooperative Council has attempted, without success, to obtain representation on the commission. The cooperatives are also facing a 10-percent increase in the taxes levied on their surplus.

Palestine.—Consumers' cooperative societies increased from 11, with 772 members and a business of £P37,763, in 1931 to 44, with 5,459 members and a business of £P350,040, in 1937. In 1937, 151 new Jewish cooperatives and 60 new Arab cooperatives were registered. The 107 Jewish credit cooperatives which reported returns of activities had 5,519 more members and £P35,004 more share capital at the end of 1937 than in the previous year. Deposits in all credit cooperatives aggregated £P3,136,522 on December 31, 1937, as compared with £P3,098,482 at the end of December 1936.

Poland.—The cooperative movement in Poland was strengthened by the law of 1934, by which the various auditing unions were amalgamated and regrouped. The State now has considerable power of interference in the affairs of the movement, but on the whole it appears to have exercised that power wisely. The restrictions on foreign trade, however, have hampered cooperative trade relations with other countries.

The cooperative wholesale, Spolem, is now the largest commercial organization in Poland. The chief field for the expansion of the wholesale is in the villages, which contain 73 percent of the population. The 141 new rural cooperative societies which were established during the first half of 1938 are members of Spolem. The cooperative movement has, in fact, developed to such an extent that its expansion has caused alarm among certain groups, such as the manufacturers, traders, and landowners. Although these groups are not numerous in Poland, they exercise a very great influence and have started a strong press campaign against cooperatives.

Spolem has recently opened two new productive works. One factory opened by Spolem specializes in fruit sirup, and also makes marmalade and cans vegetables. The other prepares various kinds of bouillon, formerly available in Poland only through two large private

firms. The new enterprise makes the cooperative market independent of these private sources. In 1938, owing to these two establishments, the production output of Spolem exceeded about 10 million zlotys for the first time during its existence.

In 1938 Poland had eight cooperative health associations, the first one being established September 15, 1936.

Yugoslavia.—The most notable achievement in 1937 was the passage, after years of persistent agitation by the movement, of a general cooperative law, to take the place of piecemeal legislation covering the different States to which the territory now included in Yugoslavia belonged before the World War, and four measures, passed between 1920 and 1930, which covered only particular types of societies.

Several societies exist for the purpose of providing medical treatment, drugs, etc., on favorable terms, especially for the rural population, and have also carried on educational propaganda for the promotion of the principles of hygiene. These societies have made good progress since their foundation, there being at the present time about 50 societies, with a membership exceeding 15,000, and the number of people receiving treatment is nearly 35,000 per annum.

COUNTRIES WHERE THE MOVEMENT IS COMPARATIVELY NEW

Argentina.—The official returns of registered cooperative societies compiled by the Argentine Ministry of Agriculture indicate that all branches of the movement have been growing steadily in recent years. The latest figures quoted in the Year Book of the Argentine Federation of Consumers' Societies reveal the existence on June 30, 1937, of 517 societies of all types with 243,295 members, paid-up capital of 37 million pesos, and an annual turn-over of 107 million pesos. Both the number of societies and the annual business have approximately doubled since 1931, the membership increased two and a half times, and the capital more than trebled in the interval. The consumers' organizations proper and the electricity societies are the branches of the movement which have made most progress. The 79 active consumers' societies in 1937 had a total membership of almost 70,000, share capital exceeding 8 million pesos, and a turn-over of 16.3 million pesos. The 51 electricity societies had an even larger membership, 71,442, and share capital of 8.9 million pesos.

Unlike those in most other countries, the cooperative electricity societies in Argentina are all urban associations, formed because of exceedingly high charges for light and power. It is said that a reduction of 30 percent in these charges has been effected by cooperative action.

El Hogar Obrero (Buenos Aires), with an individual membership of 9,430 at the end of 1936, is the largest consumers' cooperative society in Argentina. It also functions as a building and credit society, and the forwarding and purchasing agency links consumers' and agricul-

tural cooperatives directly. Steps have been taken toward the establishment of a wholesale society.

Brazil.—In August 1938 a special decree was issued by the Brazilian authorities restoring complete liberty of action to all cooperative societies, but bringing into force a number of additional measures for the registration and supervision of societies by the Minister of Labor.

The largest consumers' society in Brazil is the Consumers Cooperative of Railway Employees of Rio Grande do Sul, with a membership of 10,000.

Chile.—The Government of Chile not only encourages the formation of cooperative societies but even uses their prices, obtained monthly, as a standard of comparison with those in private stores.

The consumers' and the producers' societies have direct relations for mutually advantageous buying.

Ecuador.—The development of the cooperative movement in Ecuador has resulted in recent years in the creation of some 20 cooperative societies, but the movement has been hindered by the absence of any regulations defining the legal status of the societies. This lack was remedied by a special act issued on November 19, 1937.

Egypt.—Altogether there are now 800 societies with 80,000 individual members, a paid-up share capital of £220,000, reserves of £60,000, and an annual turn-over of £1,000,000. About 750 societies are agricultural general-purpose associations, supplying their members with all kinds of farming requirements; selling their cotton, fruit, vegetables, and other produce; fumigating their citrus trees; purchasing modern machinery such as tractors and threshing machines for use in common; and providing credit. A few of the societies also supply provisions and household requisites.

The 45 societies which are not classed as agricultural are consumers' associations which, with a membership of 5,000 and share capital of £15,000, have an annual turn-over of approximately £100,000. Formerly little official attention was paid to this form of cooperation but 2 years ago the cooperative department was transferred from the Ministry of Agriculture to the Ministry of Finance, on the ground that cooperation was an economic rather than a technical movement and that its benefits were not intended to be monopolized by any one section of the community, however important it might be. Although only limited funds are available to the cooperative department, since the change the consumers' societies have begun to expand and increase in numbers. In several places they are now doing a flourishing business. They not only supply their members with foodstuffs and clothing but also provide social facilities through clubrooms and motion-picture theaters.

By law, Egyptian cooperative societies are obliged to allocate a certain percentage of their net surplus for social services in their dis-

tricts. For the most part these grants are expended on rural schools, water supply, repairing canals and roads, street lighting, tree planting, sanitation, training in handicrafts such as weaving and rug making, the construction of halls and cinemas, and the acquisition of libraries and radio sets. The societies thus promote general culture and the results, it is said, are already visible in the better standards of education and discipline prevailing among the cooperative membership than amongst the public at large.

Newfoundland.—In 1936 a Cooperative Division was formed in the Department of Rural Reconstruction, one of the duties of which is to train young men for work in cooperative education. Already 300 study groups have been formed. Plans were announced in October 1937 for the establishment of 11 credit societies, several lobster factories, and 2 distributive societies. An experimental Government scheme for subsidizing new cooperative societies has ended.

Statistics of Retail Consumers' Associations

In six countries—Belgium, Denmark, Finland, Great Britain, Sweden, and Switzerland—the cooperative retail societies handled more than 10 percent of the entire retail trade of the country in 1935; in Finland almost one-third (30 percent) went through cooperative retail associations. The following statement shows the approximate percentage of total retail trade transacted by the cooperative movement in various countries in 1935.

	Percent		*Percent*
Austria	5–6	Hungary	8
Belgium	10	Holland	2
Denmark	10	Sweden	11
Finland	30	Switzerland	10–12
Great Britain	10–12		

Sales totaling about 4 billion dollars are shown for the local consumers' societies in the 40 countries covered in table 4. For some of the countries it is difficult to obtain reliable or recent data. In a number of other countries the figures relate only to the societies affiliated with the central cooperative organizations; in Norway, Sweden, and Great Britain, the majority of the local societies are affiliates of the central organizations, but in other countries, such as Canada and Belgium, considerable proportion of the societies are independent of the central organizations and data for these independents are not available.

For purposes of comparison the foreign currencies were converted into United States money. In making the conversions in this and succeeding tables, the par value was used, since the data are shown over a period of years, where possible, and since in a number of countries the average exchange rate has fluctuated considerably from year to year.

TABLE 4.—*Membership and Business of Local Consumers' Societies in Specified Countries*

[Conversion into United States currency made on basis of par value]

Country	Year	Number of societies reporting	Number of members	Sales		
				Foreign currency		United States currency
				Monetary unit	Amount	
Argentina	1936–37	70	69,852	Peso	16,313,204	$26,647,619
Australia	1935	168	147,234	Pound	8,196,214	67,534,344
	[1]1937	160	112,000	do	4,000,000	32,958,800
Austria	1935	101	264,464	Schilling	115,200,000	27,440,640
	1936	131	260,831	do	118,063,603	28,122,750
	1937	220	300,000	do	124,608,700	29,681,792
Belgium	1935	43	346,568	Franc	728,709,299	24,703,245
	1936	43	343,996	do	582,983,552	19,763,142
	1937	[2] 43	500,000	do	650,000,000	22,035,000
Brazil (São Paulo only)	1935	22	26,214	Milreis	20,077,736	12,408,041
Bulgaria	1935	61	69,000	Lev	459,020,700	5,600,053
	1936	61	71,244	do	511,900,000	6,245,180
	1937	62	75,000	do	556,800,000	6,792,960
Canada [3]	1935	36	11,286	Dollar	3,876,195	6,562,786
	1936	46	14,020	do	4,449,608	7,533,631
	1937	51	16,527	do	4,978,583	8,429,239
Ceylon	1935–36	21	7,602	Rupee	569,138	351,727
Chile	1937	57	63,739	Peso	83,000,000	17,106,300
Colombia	1934	5	895	do	75,669	124,695
	1936	20	3,697	do	423,548	697,965
Czechoslovakia	1935	835	642,700	Koruna	1,229,100,000	51,376,380
	1936	816	644,400	do	1,348,400,000	56,363,120
	1937	816	655,900	do	[4] 1,384,200,000	57,859,560
Denmark	1935	[5] 1,885	[5] 319,000	Krone	[5] 286,003,800	129,759,924
	1936	1,869	344,000	do	305,000,000	138,378,500
	1937	1,775	370,000	do	315,000,000	142,915,500
Egypt	1937	45	5,000	Pound	100,000	836,926
Estonia	1935	173	35,478	Kroon	26,332,000	11,946,828
	1937	192	47,000	do	45,500,000	20,643,350
Federated Malay States	1937	3	[6] 358	Straits dollar	27,379	26,319
Finland:						
K. K. societies	1935	110	265,000	Markka	1,342,400,000	57,186,240
	1936	118	273,177	do	1,503,000,000	64,027,800
	1937	122	282,600	do	1,860,000,000	79,236,000
Y. O. L. societies	1935	418	252,355	do	1,984,600,000	84,543,960
	1936	414	263,606	do	2,252,766,207	95,967,840
	1937	415	279,698	do	2,823,077,605	120,263,106
France	1935	1,064	1,698,359	Franc	2,332,540,000	154,647,402
	1936	1,200	1,600,000	do	1,471,772,000	97,578,484
	1937	1,235	1,800,000	do	1,781,409,000	118,107,417
Germany	1935	1,169	3,121,839	Reichsmark	659,600,000	266,676,280
	1936	1,162	2,094,500	do	510,000,000	206,193,000
	1937	1,162	2,010,900	do	532,069,098	215,115,536
Great Britain	1935	1,098	7,414,376	Pound	220,429,517	1,816,273,091
	1936	1,087	7,746,184	do	233,844,350	1,926,807,291
	1937	1,094	8,084,990	do	251,393,047	2,071,403,289
Hungary	1935	1,489	627,693	Pengö	81,148,481	24,028,065
	1936	1,480	630,000	do	91,306,160	27,035,754
	1937	1,500	----------	do	103,343,337	30,599,962
Iceland	1935	37	8,680	Krone	17,200,000	7,803,640
	1936	37	9,150	do	19,200,000	8,711,040
India	1934	24	1,700	Swiss franc	314,000	102,584
Irish Free State	1934	24	9,491	Pound	195,076	1,607,368
	1935	22	9,335	do	180,876	1,490,364
	1936	21	9,222	do	186,537	1,537,009
Italy	1935	3,465	775,000	Lira	1,180,000,000	105,138,000
	1937	2,938	590,417	do	1,181,505,202	105,272,113
Japan	1934	190	212,091	Yen	25,762,735	21,743,748
	1935	178	221,994	do	30,103,000	25,406,932
Latvia	1934	192	28,358	Lat	19,293,851	6,303,301
	1935	112	18,008	do	13,523,000	4,417,964
Lithuania	1935	165	21,332	Lit	33,191,364	5,619,298
	1936	166	(7)	do	46,427,654	7,860,202
	1937	175	(7)	do	55,562,955	9,406,808
Netherlands	1935	398	320,907	Florin	64,775,816	44,086,420
	1836	419	325,368	do	63,735,779	43,378,571
New Zealand	1936	21	[8] 5,000	Pound	250,000	2,059,925
Norway	1935	524	138,557	Krone	129,769,600	58,876,468
	1936	549	148,748	do	145,108,400	65,835,681
	1937	585	160,107	do	168,253,500	76,336,613

See footnotes at end of table.

TABLE 4.—*Membership and Business of Local Consumers' Societies in Specified Countries*—Continued

[Conversion into United States currency made on basis of par value]

Country	Year	Number of societies reporting	Number of members	Sales		
				Foreign currency		United States currency
				Monetary unit	Amount	
Palestine	1935	40	4,067	Palestine pound.	272,550	$2,245,730
	1936	44	5,005	do	362,869	2,989,932
	1937	44	5,459	do	350,040	2,884,225
Poland	1935	1,391	311,000	Zloty	131,700,000	25,009,830
	1936	1,552	333,000	do	142,700,000	27,098,730
	1937	1,500	325,000	do	143,200,000	27,193,680
Rumania	1934	1,767	257,907	Leu	1,259,130,054	12,717,214
South Africa, Union of	1934–35	13	13,473	Pound	503,131	4,145,649
	1935–36	14	13,619	do	553,737	4,562,627
	1936–37	23	14,494	do	712,475	5,870,580
Soviet Union	1935	25,252	40,837,000	Ruble	15,422,700	13,436,256
	1936	109,000	38,500,000	do	23,300,000	20,298,960
	1937	(7)	(7)	do	32,900,000	28,662,480
Spain	1934	272	79,814	Peseta	90,863,000	29,684,942
Sweden	1935	725	568,161	Krona	412,177,962	187,005,141
	1936	715	585,290	do	438,124,978	198,777,303
	1937	702	605,796	do	488,740,957	221,741,772
Switzerland	1935	535	402,339	Franc	274,200,381	89,581,264
	1936	541	407,737	do	283,178,881	92,514,540
	1937	540	413,715	do	299,251,995	97,765,627
United States	1937	1,802	458,481	Dollar		146,153,418
Yugoslavia	1935	97	72,327	Dinar	206,311	6,148

[1] New South Wales only.
[2] 1936.
[3] Affiliated central union only.
[4] Approximately.
[5] Societies affiliated with F. D. B., including the societies affiliated with Ringkøbing, which was absorbed by F. D. B. in 1936.
[6] 2 associations.
[7] No data.
[8] 1934.

Activities of Cooperative Wholesale Associations

Wholesale associations made proportionately larger gains than the retail associations. Of the wholesale associations for which information is available for the 3 years of 1935, 1936, and 1937, 6 wholesales had increases in number of associations each year, 8 had more individual members in 1936 than in 1935 and a still larger number in 1937, 23 had increases in sales each year, and 14 produced more goods each year.

Ten associations had fewer affiliated societies in 1937 than 1935, only three of them had fewer individual members, one had smaller sales, and none produced less goods.

Although in several associations the number of affiliated societies decreased or remained the same, in the majority of those cases this was due to amalgamations of the societies, and the number of individual members of the affiliated associations increased.

In almost every country there was a greater percentage increase from year to year in the volume of wholesale sales than in retail sales, and even in some countries, such as Germany, where retail sales

fell off notably, wholesale sales declined little, if at all, and in most instances actually increased. A number of wholesale societies made record sales in 1937. For those wholesales for which information was available for the years of 1935, 1936, and 1937, the volume of business in 1936 was 10.7 percent greater than 1935, and the 1937 volume was 11.2 percent greater than that for 1936.

TABLE 5.—*Business Done by Cooperative Wholesale Societies in Specified Countries*

[Conversions into United States currency made on basis of par value]

Country and wholesale	Year	Number of affiliated societies	Number of individual members of affiliated societies	Sales		
				Foreign currency		United States currency
				Monetary unit	Amount	
Austria: G. ö. C	1935	133	(1)	Schilling	69,498,430	$16,554,526
	1936	131	314,462	do	73,000,000	17,388,600
	1937	131	(1)	do	81,700,000	19,460,940
Belgium: S. G. C.[2]	1935	43	346,568	Franc	120,810,000	4,095,459
	1936	43	343,996	do	146,600,000	4,969,740
	1937	43	500,000	do	169,000,000	5,729,100
Bulgaria: Napred	1935	61	69,000	Lev	609,836,359	7,440,004
	1936	61	71,244	do	532,500,000	6,496,500
	1937	62	75,000	do	556,900,000	6,794,180
Canada:						
Alberta Cooperative Wholesale.	1935	18	(1)	Dollar	25,821	43,718
	1936	15	(1)	do	30,523	51,678
	1937	16	(1)	do	13,202	22,352
Manitoba Cooperative Wholesale.	1935	57	(1)	do	320,000	541,792
	1936	58	(1)	do	296,090	501,158
	1937	58	(1)	do	397,000	672,161
Saskatchewan Cooperative Wholesale.	1935	38	(1)	do	440,762	746,254
	1936	79	(1)	do	530,900	898,867
	1937	(1)	(1)	do	501,445	848,997
Czechoslovakia:						
G. E. C	1935	160	242,916	Koruna	273,728,000	11,441,830
	1936	136	238,525	do	295,938,000	12,370,208
	1937	140	231,312	do	320,954,014	13,415,878
V. D. P	1935	189	384,840	do	471,299,553	19,700,321
	1936	183	381,319	do	528,682,913	22,098,946
	1937	230	400,000	do	530,000,000	22,154,000
Sdruzeni	1935	(1)	(1)	do	23,070,494	964,347
Denmark:						
F. D. B	1935	1,869	309,000	Krone	184,186,583	83,565,452
	1936	1,885	344,000	do	195,776,214	88,823,668
	1937	1,900	347,060	do	206,841,653	93,844,058
Ringkøbing[3]	1935	70	10,000	do	3,100,000	1,406,470
Estonia: E. T. K	1935	173	35,478	Kroon	18,948,000	8,596,708
	1936	193	41,359	do	24,384,000	11,063,021
	1937	192	47,000	do	29,107,000	13,205,846
Finland:						
O. T. K	1935	115	(1)	Markka	776,745,678	33,089,366
	1936	117	(1)	do	872,000,000	37,147,200
	1937	123	(1)	do	1,094,800,000	46,638,480
S. O. K	1935	417	(1)	do	1,101,210,376	46,911,562
	1936	417	263,606	do	1,311,800,000	55,882,680
	1937	417	279,698	do	1,520,074,340	64,755,166
France	1935	1,249	(1)	Franc	761,600,000	50,494,080
	1936	1,200	1,698,359	do	863,104,260	57,223,812
	1937	1,235	1,800,000	do	1,066,021,394	70,677,218
Germany: G. E. G	1935	1,169	3,121,839	Reichsmark	289,419,000	117,012,102
	1936	1,169	2,094,500	do	309,999,304	125,332,719
	1937	1,162	2,010,900	do	330,009,321	133,422,768
Great Britain:						
English Wholesale Society.	1935	1,040	6,155,964	Pound	98,283,975	809,830,469
	1936	1,025	6,379,274	do	107,691,527	887,345,875
	1937	1,023	6,581,337	do	119,851,542	987,540,750
Scottish Wholesale Society	1935	238	(1)	do	18,635,115	153,547,757
	1936	234	(1)	do	20,580,212	169,574,773
	1937	232	(1)	do	22,438,683	184,888,016
English and Scottish Joint Wholesale Society.	1935	[4] 2		do	5,864,114	48,318,540
	1936	[4] 2		do	7,537,956	62,110,496
	1937	[4] 2		do	8,297,014	68,364,906

See footnotes at end of table.

TABLE 5.—*Business Done by Cooperative Wholesale Societies in Specified Countries*—Con.

Country and wholesale	Year	Number of affiliated societies	Number of individual members of affiliated societies	Sales		
				Foreign currency		United States currency
				Monetary unit	Amount	
Hungary: "Hangya"	1935	1,489	627,693	Pengö	57,238,268	$16,948,251
	1936	1,480	630,000	do	69,330,760	20,528,838
	1937	1,480	630,000	do	80,053,757	23,703,917
Iceland	1935	39	8,684	Krone	6,418,000	2,911,847
	1936	40	9,150	do	8,500,000	3,856,450
Japan	1935	178	221,994	Yen	72,235,000	60,966,340
	1936	232	243,670	do	95,990,000	81,015,560
	1937	(1)	(1)	do	98,788,046	83,377,111
Latvia: Konzums	1935	223	28,358	Lat	1,350,000	441,045
Lithuania: Lietukas	1935	112	21,332	Lit	60,530,334	10,247,786
	1936	108	(1)	do	73,710,000	12,479,103
	1937	(1)	(1)	do	75,000,000	12,697,500
Netherlands: Handelskamer	1935	303	(1)	Florin	25,600,000	17,428,480
	1936	298	221,013	do	25,688,000	17,488,390
	1937	302	268,000	do	28,118,700	19,143,211
Norway: N. K. L	1935	524	138,557	Krone	41,393,675	18,780,310
	1936	549	148,748	do	46,520,538	21,106,368
	1937	585	160,107	do	54,105,407	24,547,623
Palestine	1935	40	4,067	Palestine pound.	272,887	2,248,307
	1936	44	5,005	do	336,410	2,771,917
	1937	44	5,459	do	409,545	3,374,528
Poland: "Spolem"	1935	996	268,762	Zloty	72,215,000	13,713,629
	1936	1,264	292,000	do	78,660,000	14,937,334
	1937	1,531	325,000	do	91,000,000	17,280,900
	1938	1,800	375,000	do	100,000,000	18,990,000
Rumania: "Hangya"	1935	315	(1)	Leu	2,647,589	21,815,339
Spain: Union de Cooperativas del Norte.	1935	50	(1)	Peseta	2,104,575	687,565
Sweden: K. F	1935	725	568,161	Krona	177,665,741	80,606,947
	1936	715	585,290	do	192,778,079	87,463,414
	1937	702	605,796	do	217,212,545	98,549,332
Switzerland:						
Konkordia	1935	51	(1)	Franc	3,263,716	1,066,256
	1936	(1)		do	3,356,000	1,096,405
	1937	(1)		do	3,340,000	1,091,178
V. O. l. G	1935	[5] 314	(1)	do	37,900,000	12,381,930
	1936	[5] 318	(1)	do	37,710,000	12,319,557
	1937	[5] 326	24,000	do	42,670,000	13,940,289
	1938	[5] 329	(1)	do	43,000,000	14,048,100
V. S. K	1935	536	448,328	do	177,148,207	57,874,339
	1936	541	407,737	do	188,476,063	61,575,130
	1937	540	413,715	do	200,488,233	65,499,506
	1938	543	(1)	do	207,029,695	67,636,601
Scandinavian Cooperative Wholesale.	1935	[6]		Krone	45,231,452	20,521,510
	1936	[6]		do	50,807,317	23,051,280
	1937	[6]		do	66,826,330	30,319,106
United States: Wholesales [7]	1935	1,832	(1)			47,554,724
	1936	1,878	(1)			46,565,116
	1937	2,044	(1)			54,506,083

[1] No data.
[2] Changed in 1935 from F. S. C.
[3] Absorbed by F. D. B. in 1936.
[4] Owned by English and Scottish wholesale societies.
[5] 229 consumers' societies.
[6] Owned by the cooperative wholesale societies of the 3 Scandinavian countries and the 2 wholesales of Finland.
[7] Data for 1935 and 1936 cover 31 wholesales, and that for 1937, 36 wholesales.

Value of goods produced showed an even larger percentage increase during the 3-year period than did wholesale sales—an increase of 17 percent and 12 percent, respectively. Seven wholesales manufactured in 1937 goods valued at between 20 and 30 percent of their annual sales; 2 between 30 and 40 percent; 1 over 40 percent; and 1 over 60 percent. The following statement shows for 5 countries a

comparison of the percentage of total goods sold, produced by the wholesales in those countries, in 1934 and in 1937.

	1934	*1937*
Austria (G. ö. C.)	6. 4	16. 0
Bulgaria ("Napred")	12. 9	21. 9
Finland (O. T. K.)	12. 7	20. 3
Poland ("Spolem")	5. 9	8. 2
Sweden (K. F.)	56. 0	63. 6

In Austria, Czechoslovakia (V. D. P.), and Finland (O. T. K.), the wholesale societies' productive output was doubled or even trebled in value, while in Estonia and Finland (S. O. K.), the 3-year increase ranged from 50 to 100 percent. In France, Great Britain, Norway, Poland, and Sweden, the increase ranged from 25 to 50 percent, while in Czechoslovakia (G. E. C.), Denmark, Germany, and Netherlands, it was between 10 and 25 percent.

This increased production was due in some cases to the opening of new factories, in others to the expansion of existing facilities.

TABLE 6.—*Value of Goods Produced by Cooperative Wholesale Societies, 1935–37*

[Conversions into United States currency on basis of par value]

Country and wholesale	Year	Value of goods produced		
		Foreign currency		United States currency
		Monetary unit	Amount	
Austria: G. ö. C	1935	Schilling	4, 147, 000	$987, 815
	1936	do	12, 789, 763	3, 046, 522
	1937	Franc	27, 000, 000	915, 300
Belgium: S. G. C.[1]	1935	Lev	90, 493, 957	1, 104, 026
Bulgaria: Napred	1936	do	117, 433, 998	1, 432, 695
Czechoslovakia:				
G. E. C	1935	Koruna	52, 731, 000	2, 204, 156
	1936	do	57, 268, 000	2, 393, 802
	1937	do	64, 904, 638	2, 713, 014
V. D. P	1935	do	68, 363, 000	2, 857, 573
	1936	do	198, 723, 550	8, 306, 644
	1937	do	200, 000, 000	8, 360, 000
Denmark:				
F. D. B	1935	Krone	51, 165, 291	23, 213, 693
	1936	do	55, 805, 929	25, 319, 150
	1937	do	60, 597, 998	27, 493, 312
Ringkøbing[2]	1935	do	3, 500, 000	1, 587, 950
Estonia:				
E. T. K	1935	Kroon	4, 130, 000	1, 873, 781
	1936	do	4, 970, 000	2, 254, 889
	1937	do	6, 206, 000	2, 815, 662
Finland:				
O. T. K	1935	Markka	103, 900, 000	4, 426, 140
	1936	do	155, 000, 000	6, 603, 000
	1937	do	222, 000, 000	9, 457, 200
S. O. K	1935	do	212, 010, 997	9, 031, 668
	1936	do	259, 800, 000	11, 067, 480
	1937	do	315, 868, 850	13, 456, 013
France	1935	Franc	48, 233, 000	3, 197, 848
	1936	do	54, 287, 610	3, 599, 269
	1937	do	62, 441, 343	4, 139, 861
Germany: G. E. G	1935	Reichsmark	99, 513, 200	40, 233, 187
	1936	do	107, 581, 300	43, 495, 120
	1937	do	120, 608, 663	48, 762, 082
Great Britain:				
English Cooperative Wholesale Society	1935	Pound	32, 449, 932	267, 377, 705
	1936	do	38, 473, 597	317, 010, 897
	1937	do	43, 757, 656	360, 549, 958
Scottish Cooperative Wholesale Society	1935	do	5, 421, 240	44, 669, 391
	1936	do	6, 642, 554	54, 732, 652
	1937	do	6, 612, 000	54, 480, 896
English and Scottish Joint Cooperative Wholesale Society	1935	do	704, 332	5, 803, 484
	1936	do	713, 696	5, 880, 641
	1937	do	852, 592	7, 025, 102

[1] Changed in 1935 from F. S. C.
[2] Absorbed by F. D. B. in 1936.

TABLE 6.—*Value of Goods Produced by Cooperative Wholesale Societies, 1935–37*—Con.

Country and wholesale	Year	Value of goods produced		
		Foreign currency		United States currency
		Monetary unit	Amount	
Hungary: "Hangya"	1935	Pengö	4,355,879	$1,289,776
	1936	do	3,596,268	1,064,855
	1937	do	4,783,095	1,416,274
Iceland	1935	Krone	1,970,000	893,789
	1936	do	1,589,199	721,020
Japan	1935	Yen	13,204,000	11,144,176
Netherlands: Handelskamer	1935	Florin	2,701,000	1,838,841
	1936	do	3,000,000	2,042,400
	1937	do	3,158,320	2,150,184
Norway: N. K. L	1935	Krone	18,200,000	8,257,340
	1936	do	23,000,000	10,435,100
	1937	do	24,000,000	10,888,800
Poland: "Spolem"	1935	Zloty	5,479,000	1,040,462
	1936	do	5,548,000	1,053,565
	1937	do	7,500,000	1,424,250
	1938	do	10,000,000	1,899,000
Rumania: "Hangya"	1935	Leu	590,469	4,865,287
Sweden: K. F	1935	Krona	104,223,445	47,286,177
	1936	do	120,859,531	54,833,969
	1937	do	139,581,181	63,327,982
Switzerland:				
V. O. l. G	1935	Franc	1,500,000	490,050
V. S. K	1935	do	5,080,000	1,659,636
	1936	do	5,280,152	1,725,026

Financial Status, Net Gain, and Patronage Rebates of Cooperative Associations

Table 7 shows, for wholesale and retail associations, in those countries for which information is available, share capital, net worth, net gain, and patronage rebates.

TABLE 7.—*Share Capital, Net Worth, Net Gain, and Patronage Rebates of Cooperative Associations, by Countries*

[Conversions into United States currency made on basis of par value]

Country and type of association	Year	Share capital	Net worth [1]	Net gain	Patronage rebates
Australia: Retail [2]	1935	$14,934,127	$24,285,436	(3)	$1,022,794
Austria:					
Retail [4]	1935	806,545	3,475,814	$393,506	367,304
Wholesale: G. ö. C	1935	449,722	1,220,537	71,698	44,782
Belgium:					
Retail [4]	1935	564,130	1,192,500	906,723	918,046
Wholesale: F. S. C	1935	129,939	223,503	(3)	10,916
Bulgaria:					
Retail [4]	1935	175,180	406,358	15,335	27,279
Wholesale: "Napred"	1935	137,274	488,354	9,882	3,953
Canada:					
Retail [5]	1935	722,954	1,354,480	272,589	221,796
Retail [4]	1936	812,244	1,431,985	355,133	278,005
Do	1937	925,865	1,629,692	389,254	309,954
Wholesale [6]	1935	64,582	80,067	27,596	20,317
Do	1936	113,556	135,096	39,361	26,395
Do	1937	146,197	170,722	45,419	31,204
Chile: Retail [7]	1937	2 885,400	3,503,700	(3)	(3)
Czechoslovakia:					
Retail [4]	1935	3,359,633	6,628,853	120,718	1,112,674
Wholesale: G. E. C and V. D. P	1935	1,259,016	3,167,311	180,074	(3)
Denmark:					
Retail [4]	1935	(3)	(3)	8,892,520	4,731,637
Do	1937	(3)	(3)	11,660,090	10,072,140
Wholesale: F. D. B	1937	784,294	5,921,213	5,396,818	4,773,273
Estonia:					
Retail [4]	1935	365,682	1,054,399	128,397	22,685
Wholesale: E. T. K	1935	317,136	522,209	44,463	24,500

See footnotes at end of table.

TABLE 7.—*Share Capital, Net Worth, Net Gain, and Patronage Rebates of Cooperative Associations, by Countries*—Continued

Country and type of association	Year	Share capital	Net worth	Net gain	Patronage rebates
Finland:					
Retail: K. K. societies	1935	$777,961	$8,874,688	$1,248,010	$598,317
Retail: Y. O. L. societies	1935	408,960	11,314,560	1,767,900	698,640
Wholesale: O. T. K	1935	157,577	12,466,294	1,623,486	749,760
Wholesale: S. O. K	1937	46,860	7,429,400	1,492,576	[3]
France:					
Retail [4]	1935	12,762,750	28,720,497	11,271,000	8,038,212
Wholesale: M. D. G	1936	1,184,919	2,868,497	320,580	[3]
Do	1937	1,529,102	3,333,245	406,987	22,256
Great Britain:					
Retail [4]	1935	1,118,502,378	1,298,576,835	219,384,212	168,098,606
Do	1936	1,168,865,006	1,365,787,879	232,945,720	178,941,565
Do	1937	1,223,686,087	1,539,999,900	244,430,701	189,125,834
Wholesale: C. W. S	1937	121,248,660	137,541,967	23,063,703	19,745,988
Hungary:					
Retail [4]	1935	1,451,186	3,124,743	108,669	226,813
Wholesale: "Hangya"	1935	2,629,368	2,885,495	62,773	37,605
Iceland:					
Retail [4]	1935	1,173,722	2,543,442	216,415	34,028
Wholesale	1935	339,368	800,781	65,333	[3]
Japan:					
Retail [4]	1935	1,999,436	3,381,064	551,976	[3]
Wholesale	1935	2,441,692	2,786,888	[8] 17,724	[3]
Latvia:					
Retail [4]	1935	176,418	812,830	48,352	[3]
Wholesale: Konzums	1935	169,884	924,561	117,285	35,937
Norway:					
Retail [4]	1935	7,865,797	14,194,458	2,954,948	1,775,328
Do	1936	8,848,965	15,561,910	3,332,427	[3]
Do	1937	[3]	17,149,860	3,856,450	2,268,500
Wholesale: N. K. L	1935	865,660	1,867,429	496,348	198,721
Palestine:					
Retail [9]	1935	71,381	123,019	25,090	[3]
Do	1936	90,431	170,142	48,903	[3]
Do	1937	110,214	210,434	29,218	[3]
Wholesale	1935	62,902	162,124	[3]	28,518
Do	1936	106,696	251,385	[3]	37,268
Do	1937	169,837	363,470	[3]	46,661
Poland:					
Retail [9]	1935	1,174,152	3,864,085	469,623	132,550
Do	1936	1,161,998	3,968,530	564,573	[3]
Wholesale: "Spolem"	1935	314,474	1,170,164	53,362	13,103
Soviet Union:					
Retail [4]	1935	1,240,501,680	2,163,363,840	189,921,600	[3]
Wholesale: Centrosoyus	1935	4,277,592	1,116,878	[3]	[3]
Spain: Retail [4]	1934	4,268,009	7,522,268	[3]	1,697,860
Sweden:					
Retail [4]	1935	20,926,005	47,958,359	8,521,393	7,055,942
Do	1936	[3]	50,835,860	9,024,093	[3]
Do	1937	[3]	53,977,233	9,901,549	
Wholesale: K. F	1935	10,044,918	25,519,718	3,027,540	783,540
Switzerland:					
Retail [4]	1935	2,885,088	16,313,765	6,566,017	5,643,089
Wholesale: V. S. K	1935	546,830	4,009,589	244,045	[3]
United States:					
Wholesale	1936	[10] 2,151,015	[3]	[11] 1,087,264	[12] 684,811
Do	1937	[11] 2,307,092	[3]	[13] 1,360,491	[14] 967,495

[1] Share capital plus reserves.
[2] Consumers' societies and 71 societies with consumer and producer functions.
[3] No data.
[4] Societies affiliated to central union or unions.
[5] 36 of 40 societies affiliated to central union or unions.
[6] Alberta, Manitoba, and Saskatchewan cooperative wholesales, except patronage rebates which cover only last 2.
[7] 57 consumers' societies.
[8] Loss.
[9] Includes both societies affiliated to central union and those not affiliated.
[10] 26 wholesales. [11] 23 wholesales. [12] 17 wholesales. [13] 25 wholesales. [14] 21 wholesales.

Development of Cooperative Societies in 1937, in Relation to Population

Table 8 shows, by country, the membership of the consumers' societies and of all types of cooperatives, both absolutely and in relation to the total population of the country.

TABLE 8.—*Development of Cooperative Societies in 1937,[1] in Relation to Population*

Country	Population	Members of consumers' societies		Members of societies of all types	
		Number	Percent of population	Number	Percent of population
Algeria	7,234,684	3,000	0.04	64,450	0.89
Argentina	12,561,361	69,852	.56	254,063	2.02
Armenia	1,109,200	152,440	13.74	219,402	19.78
Australia	8,956,179	142,000	1.59	243,602	2.72
Austria	6,759,062	300,000	4.44	1,053,421	15.59
Belgium	8,330,959	500,000	6.00	968,625	11.63
Brazil	41,560,147	26,214	.06	200,000	.48
Bulgaria	6,077,939	84,640	1.39	944,147	15.53
Canada	10,376,786	16,364	.16	651,978	6.28
Ceylon	5,306,871	7,602	.14	52,139	.98
Chile	4,626,508	63,739	1.38	112,532	2.43
China	422,707,868	58,648	.01	1,643,670	.39
Colombia	8,698,634	3,697	.04	13,138	.15
Cyprus	347,959			15,788	4.54
Czechoslovakia	14,700,000	655,900	4.46	3,012,986	20.50
Denmark	3,706,349	347,096	9.36	1,791,871	48.35
Egypt	15,904,525	5,000	.03	80,000	.50
Estonia	1,126,413	47,000	4.17	220,504	19.58
Federated Malay States	1,713,096	358	.02	104,000	6.07
Finland	3,667,067	562,293	15.33	755,339	20.60
France	42,014,594	1,600,000	3.81	4,558,615	10.85
Germany	66,030,491	2,010,900	3.05	8,224,510	12.46
Great Britain	44,790,485	8,084,990	18.05	8,458,895	18.89
Greece	6,936,900	[2]	[2]	300,000	4.32
Guadeloupe	204,239			2,642	1.29
Hungary	9,748,319	630,000	6.46	1,358,014	13.93
Iceland	116,948	12,000	10.26	12,466	10.66
India	355,399,880	1,700	[3]	4,304,309	1.21
Irish Free State	2,968,420	9,222	.31	151,056	5.09
Italy	42,527,561	590,417	1.39	1,129,480	2.66
Jamaica	1,050,667			18,647	1.77
Japan	69,254,148	243,670	.35	5,118,044	7.39
Korea	22,899,038			1,408,678	6.15
Latvia	1,950,502	18,008	.92	391,369	20.07
Lithuania	2,499,529	21,332	.85	235,396	9.42
Luxemburg	296,913	[2]	[2]	60,671	20.43
Madagascar	3,701,770	[2]	[2]	12,009	.32
Martinique	246,497			1,441	.58
Mexico	16,552,722	36,042	.22	166,060	1.01
Morocco	7,097,908			8,669	.12
Netherlands	8,556,920	325,368	3.80	578,539	6.76
Netherlands Indies	60,731,025	1,838	[3]	18,606	.03
New Zealand	1,548,909	5,000	3.22	96,494	6.23
Norway	2,814,914	160,107	5.69	466,445	16.57
Palestine	1,035,821	6,070	.59	248,793	24.02
Poland	32,347,300	325,000	1.00	2,959,518	9.15
Portugal	6,825,883	15,000	.22	19,000	.28
Rumania	19,033,363	118,000	.62	1,414,594	7.43
Siam	11,506,207			11,000	.10
South Africa, Union of	9,530,649	16,376	.17	91,692	.96
Soviet Union	168,000,000	39,500,000	23.51	57,870,000	34.45
Spain	24,583,096	833,000	3.39	[4] 833,000	[4] 3.39
Straits Settlements	1,114,015			28,164	2.53
Sweden	6,250,506	637,262	10.20	1,178,040	18.85
Switzerland	4,066,400	413,167	10.16	780,470	19.19
Tanganyika	5,063,660	[2]	[2]	18,554	.37
Tunis	2,603,385	[2]	[2]	5,000	.19
Turkey	16,158,018	[2]	[2]	65,110	.40
United States	122,681,024	677,750	.55	12,508,503	10.20
Uruguay	2,065,986			18,000	.87
Yugoslavia	13,934,038	88,305	.63	933,384	6.70

[1] Or latest available year, for those countries for which 1937 data are not available.
[2] No data.
[3] Less than 1/100 of 1 percent.
[4] Consumers' societies only; no data later than 1934 for others, and the membership of consumers' associations alone in 1937 is more than twice the membership of all societies in 1934.

SOURCES: This article is based on data from the People's Yearbook, Manchester, England, 1937, 1938, and 1939; Yearbook of Agricultural Cooperation, London, 1937 and 1938; International Cooperaitve Alliance, Statistics of the Affiliated National Organizations for 1933-35, London, 1937; Cooperaitve Union, Ltd., Report of the Seventieth Annual Cooperative Congress, Scarborough, England, June 6 to 8, 1938, Manchester, 1938; and current issues of Cooperative Information (Geneva), Industrial and Labor Information (Geneva), Review of International Cooperation (London), Bombay Cooperative Quarterly, Annals of Collective Economy (Geneva), The Producer (Manchester), Le Coopérateur Belge (Brussels), Canadian Cooperator (Brantford, Ontario), The Cooperative Productive Review (Leicester), Kooperatøren (Oslo), Kooperatören (Stockholm), La Coopération (Basel), Schweiz. Konsum-Verein (Basel), and L'Association Ouvrière (Paris). In addition, other data for specific countries were obtained from the following sources: *Argentina.*—Federación Argentina de Cooperativas de Consumo, Anuario, 1938, Buenos Aires, 1938. *Aus-*

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COOPERATIVE PURCHASING BY FARMERS, 1937–38

AMONG the cooperative activities of farmers in the United States, purchasing of supplies is assuming a growing importance. A recent report of the Farm Credit Administration [1] points out that whereas in 1913 the business of cooperative purchasing associations accounted for only 1.9 percent of the total business of farmers' cooperatives, by 1937–38 the percentage had risen to 14.6. In the latter year the 2,600 purchasing associations had an estimated combined membership of 900,000 and a business for the year amounting to some $350,000,000.

The number, membership, and business of the farmers' cooperative purchasing associations are shown, by States and geographical divisions, in the following table. The figures include both the retail and the wholesale associations. As the table indicates, the total business of all the purchasing associations for 1937–38 was estimated at $350,000,000. That figure, however, included the value of goods marketed by these associations, amounting in all to about $27,000,000. At the same time the marketing associations (not covered in the table) purchased supplies to the value of $117,000,000. The total purchasing business in 1937–38, therefore—including that of marketing as well as purchasing associations—was about $440,000,000.

[1] U. S. Farm Credit Administration. Miscellaneous Report No. 18: Statistics of Farmers' Marketing and Purchasing Cooperatives, 1937–38 Marketing Season, by R. H. Elsworth. Washington, 1939.

Estimated Membership and Business of Farmers' Cooperative Purchasing Associations, 1937–38

Geographical division and State	Number of associations	Estimated membership	Estimated business (000)	Geographical division and State	Number of associations	Estimated membership	Estimated business (000)
United States	2,600	900,000	$350,000	South Atlantic—Continued.			
				West Virginia	10	1,400	$860
New England	70	94,950	30,960	North Carolina	22	8,000	3,700
Maine	25	6,000	2,300	South Carolina	1	30	10
New Hampshire	4	1,750	2,500	Georgia	13	6,800	600
Vermont	4	800	1,070	Florida	5	300	700
Massachusetts	13	85,000	23,000				
Connecticut	24	1,400	2,090	East South Central	94	26,000	5,400
				Kentucky	7	1,500	300
Middle Atlantic	264	131,600	53,100	Tennessee	15	2,800	800
New York	164	105,000	39,000	Alabama	50	15,000	2,800
New Jersey	25	6,600	4,500	Mississippi	22	6,700	1,500
Pennsylvania	75	20,000	9,600				
				West South Central	103	26,450	8,190
East North Central	607	248,000	105,500	Arkansas	8	1,150	550
Ohio	110	38,000	23,000	Louisiana	6	1,300	590
Indiana	92	50,000	23,500	Oklahoma	31	10,000	2,470
Illinois	122	82,000	27,000	Texas	58	14,000	4,600
Michigan	67	18,000	10,000				
Wisconsin	216	60,000	22,000	Mountain	172	35,470	8,780
				Montana	89	10,000	3,100
West North Central	1,036	256,000	82,800	Idaho	33	11,000	2,100
Minnesota	253	75,000	27,000	Wyoming	8	2,850	570
Iowa	143	42,000	11,000	Colorado	29	9,000	2,000
Missouri	152	30,000	19,000	New Mexico	2	1,350	600
North Dakota	103	20,000	5,000	Arizona	2	150	50
South Dakota	72	19,000	4,200	Utah	8	1,000	330
Nebraska	179	50,000	11,000	Nevada	1	120	30
Kansas	134	20,000	5,600				
				Pacific	156	42,000	32,800
South Atlantic	98	39,530	22,470	Washington	84	19,000	11,000
Maryland	14	3,000	2,600	Oregon	39	11,000	3,400
Virginia	33	20,000	14,000	California	33	12,000	18,400

Housing Conditions

RENT-CONTROL LAW OF CUBA [1]

A FIXED legal rate for the leases of urban property in Cuba built prior to July 1, 1937, to be in effect for 2 years dating from March 26, 1939, with option for the tenant (compulsory for the landlord) of extension for the same period, was established by a law of March 23, 1939. Dwelling houses erected on rural property are also included under the law, but if the renting of rural property is contingent upon the employment of the renter upon the estate this law does not apply when the renter's employment ceases; leases covering new buildings and floors or rooms built subsequent to July 1, 1937, are excluded, as well as contracts for lodging made with the proprietors of hotels and boarding houses. Compulsory extension of lease contract is excused (1) when the owner requires the property for a dwelling for himself or his relatives in ascending or descending order or for a family commercial or industrial enterprise, with 2 months' notice if needed for a dwelling and 4 months if for a commercial or industrial establishment; (2) when the owner proves his intention to raze the building; (3) when the building is condemned by public authorities; (4) in case of expropriation; (5) when a governmental body occupies its own property for its own needs; (6) when the lessee sublets without the permission of the lessor; and (7) for a lessee's default which invalidates the contract. In cases (1) and (2) the lessee has a right to be indemnified, 2 months' rent for a dwelling and 4 months for a commercial or industrial establishment. In any case the lessee has a right to claim the refund of sums he has paid in excess of the legal rate since this law went into effect, and this regardless of indemnities due.

The lawful rate is to be that in force as of July 1, 1937, or the rental stipulated in the lease if less than the former. For improvements made after July 1, 1937, the lessor may add to the rent not to exceed 6 percent of the value of the improvements. In cases of subletting, the legal rate is to be applied for the benefit of both the principal renter and the subrenter. For apartment houses the legal rate shall be that in force on February 1, 1939, minus 25 percent. In leases on urban property the rental may not be increased more than once in a year when no change in tenant occurs, nor more than 10 percent each time; but this rule does not apply in leases which are subject to fixed

[1] Gaceta Oficial (Habana), March 25, 1939, p. 5795.

rental and extension under the present law, while either is in effect. The amount of cash bond required to be posted for the rental of dwellings may not exceed 1 month's rent, irrespective of the amount or the duration of the lease, nor may the lessor retain a larger amount on the ground of special services. When the rental charged as of July 1, 1937, included certain services (light, electricity, gas, water, janitor service, and similar services), they may not be suspended nor may their proportionate value be demanded in addition to the rental, but if the lessor was receiving cash value for the services he may continue to do so, but not in excess of their cost to him. In case of the death of the lessee, the full benefit of the present law shall accrue to members of his family living with him if the premises are used for a dwelling, or if as a commercial or industrial establishment to the partner or heir who continues the business.

The usual action for eviction shall continue to be valid in accordance with general law, but in actions for eviction no pleadings will be admitted on the ground of nonpayment of rental higher than the legal rate fixed by this law nor that the fixing of the rental is awaiting judicial decision. In any event the tenant may avoid eviction at any stage of the proceedings by depositing with the court before which action is being heard the amount of rent due the lessor up to the date of the deposit. A lessor who files a suit for eviction for nonpayment of rental above the lawful rate shall be ordered to indemnify the tenant by an amount 3 times that of the rental the nonpayment of which was alleged, and pay the costs of the action; but the court may, at its judgment and upon consideration of the circumstances, moderate the amount of the indemnity. The provisions stated above are expressly made retroactive, with no mention of the limit within which this retroactivity may operate.

Buildings of all classes newly constructed during the period contemplated in the present law (up to March 26, 1941), fully completed and declared habitable before March 26, 1941, will be exempted from all land taxes and taxes upon the issuance of building permits, and will enjoy a reduction of 33 percent of all annual charges for water supplied by the public authorities. The exemption from taxes is to be from 5 to 10 years, the longest exemption being for separate dwellings and apartment houses meeting specified high standards of living conditions, and the 5 years' exemption for those offering less satisfactory living conditions than those specified for 7, 8, 9, or 10 years of freedom from taxes. Buildings for industrial or commercial use are to enjoy tax exemption for 8 years. The reduction on water rate is to apply to the proprietors of apartment houses who are required to reduce rents 25 percent below the rates on February 1, 1939, but only during the legal extension of the rental rate established by this law.

BUILDING AND LOAN ASSOCIATIONS IN GREAT BRITAIN, 1938

THE assets of building societies, or building and loan associations, in Great Britain, increased to nearly £759,000,000 during 1938, as compared with slightly over £710,000,000 in 1937, according to the latest advance report of the Registrar of Friendly Societies.[1] In 1938 there were 971 such associations in operation, of which 857 were permanent and 114 were terminating societies. Of the permanent societies 21 had assets in excess of £5,000,000, 71 had assets of from £1,000,000 to £5,000,000, and 765 were smaller. Although there were 6 fewer societies in 1938 than in 1937, the assets increased by £48,516,099. Summary statistics are shown in the accompanying table.

Status of Building Societies in Great Britain, 1928–38

Year	Number of societies	Number of share investors	Number of depositors	Number of borrowers	Advances on mortgages during year	Management expenses	Total assets
1928	1,035	1,130,066	356,549	553,884	£58,664,684	£1,586,354	£268,464,781
1929	1,026	1,265,329	393,829	628,933	74,718,748	1,821,711	312,745,883
1930	1,026	1,449,432	428,343	720,443	88,767,426	2,133,801	371,164,961
1931	1,013	1,577,905	465,173	802,534	90,253,133	2,372,801	419,185,370
1932	1,014	1,692,167	545,648	868,794	82,142,116	2,497,885	469,334,048
1933	1,013	1,747,980	631,371	948,523	103,195,663	2,736,185	501,069,594
1934	1,007	1,857,592	695,495	1,067,057	124,558,507	3,048,682	555,590,610
1935	999	1,938,684	763,772	1,180,181	130,947,205	3,379,047	602,005,795
1936	985	2,010,615	776,857	1,295,221	140,310,068	3,815,944	656,188,098
1937	977	2,083,939	794,284	1,392,133	136,855,953	3,895,968	710,380,559
1938	971	2,152,600	804,070	1,479,429	137,019,678	4,076,614	758,896,658

The number of societies decreased from 1,035 in 1928 to 971 in 1938, while there was a marked increase in the number of share investors, depositors, and borrowers, as well as in the amounts advanced on mortgages, expenditures for management, and total assets in this 11-year period. Notwithstanding that the number of borrowers was higher in 1938 than in any previous year, and that there were more share investors and depositors, the total sum advanced on mortgages during the year, amounting to £137,019,678, was below the total of £140,310,068 advanced in 1936. However, advances in 1938 totaled somewhat more than in 1937, in which year the aggregate was £136,855,953. The highest expenses for management were in 1938, or £4,076,614, followed by the total for 1937, amounting to £3,895,968. Thus costs increased, even though the total amount of loans was lower than in 1936, but this is partially explained by the increases in the number of share investors, depositors, and borrowers. Assets have increased steadily from year to year in the period covered by the tabulation. The total of £758,896,658 shows a growth in assets of £102,708,560 in 2 years.

[1] Great Britain. Registry of Friendly Societies. Building Societies, Statistical Summary, 1928–38. London, 1939. For earlier figures see Monthly Labor Review, issues of June 1936 and June 1938.

Health and Industrial Hygiene

OCCUPATIONAL-DISEASE LEGISLATION OF 1939

IN 1939 (as of July 1) the legislatures of a number of States considered the subject of occupational-disease laws. In three States (Arkansas, Idaho, and Maryland) new laws were passed granting compensation for a number of specified diseases contracted in industry.

In Arkansas, some 38 diseases that may arise out of and be contracted in the course of the employment are to be compensated under the new workmen's compensation law (Acts of 1939, No. 319 [1]). In order to be compensable, however, the death or disablement of an employee must result within 3 years in the case of silicosis or asbestosis, or 1 year in the case of any other occupational disease. The act provides for the establishment of a medical board which has the final decision on medical facts in occupational-disease cases. The commission established in that State to administer the law is empowered by the act, after a public hearing and subject to certain conditions, to add to the schedule of occupational diseases such diseases as the development of industrial processes creates.

In Idaho the occupational-disease law (Acts of 1939, ch. 161) contains 11 groups, covering 15 or more diseases. In order to be compensable in that State, disablement or death must result within 2 years in the case of silicosis or 1 year in the case of any other occupational disease. The law contains special provisions for the compensating of particular diseases, such as silicosis, and a medical panel of three is authorized to be named by the industrial accident board for the determination of claims for compensation for occupational diseases other than silicosis. In the case of silicosis the law authorizes the establishment of a medical panel consisting of six members of the medical profession, all of whom must have had a certain number of years' practice in the diagnosis, treatment, and care of silicosis.

The Maryland occupational-disease law (Acts of 1939, ch. 465), which became effective on June 1, 1939, contains a list of 34 compensable diseases. In that State disablement or death from any other disease enumerated must occur within 1 year after the last injurious exposure to such disease in the employment, or 3 years in the case of silicosis or asbestosis. As in the other States already mentioned, a med-

[1] For summary of the provisions of this law, see Monthly Labor Review, May 1939 (p. 1101). See also present status of law on p. 47.

ical board is established consisting of three members. In the control and prevention of occupational diseases, the law specifically provides that the State department of health and the Commissioner of Health of Baltimore City shall study ways and means for the control and prevention of all occupational diseases and to enforce all regulations regarding such diseases. These agencies are also empowered to investigate industrial conditions causing occupational diseases and must recommend to the legislature for enactment such measures, including additions to the list of diseases now covered under the act, as the study and experience of the agency may demonstrate to be advisable.

The Legislature of Ohio amplified the list of compensable occupational diseases to include "any other occupational disease." In doing so it defined such disease as one "peculiar to a particular industrial process, trade, or occupation, and to which an employee is not ordinarily subjected or exposed outside of or away from his employment." The legislature in this State also reduced the period of exposure for silicosis from 5 to 3 years.

The Minnesota Legislature, by the provisions of chapter 306, Acts of 1939, enlarged the list of compensable diseases so as to include certain diseases due to the hazards of fire fighting. In that State hereafter (ch. 322) all occupational diseases must be reported by a physician within 5 days. This legislative provision also authorizes the State department of health to investigate and to make recommendations for the elimination or prevention of occupational diseases.

In the State of Washington the legislature of 1939 (ch. 135) amended the basic occupational-disease law of 1937. In the case of silicosis and asbestosis, the amendatory law provided that the claimant must have been employed in the State for 2 years prior to date of claim, and if the inception of such disease occurred outside the State, the disease must have been quiescent and nondisabling for 2 years prior to the injurious exposure in the State before compensation may be payable. For diseases other than silicosis and asbestosis, the quiescent period is 1 year. In this State the legislature also deleted the provision in the original law that the cost of occupational-disease coverage shall be borne equally by employer and employee. By the provisions of another act (ch. 50) the legislature revised the classification and rates of contributions to the occupational-disease fund by employers engaged in extra-hazardous employments.

In New York an amendment was adopted (ch. 676) relating to the treatment and care for disability due to dust diseases. The 90-day period for medical treatment and hospital care may be extended for an additional 180 days, and hereafter need not be continuous.

A new and comprehensive occupational-disease law was enacted in Pennsylvania (Act. No. 284). Unlike the old law, which was supplementary to the Workmen's Compensation Act, the new statute fixes

the benefits to be paid, the procedure, etc., for making claims. While it provides coverage for the same occupational diseases specified in the old law, the amount of compensation payable is considerably reduced. Under the old occupational-disease law the total amount of compensation payable might be unlimited, while the new act provides a maximum of $7,500. The minimum amount payable weekly was reduced from $12 to $9 or "full wages," except that in the event the employee receives less than $9 a week his compensation must be at least $5. The amendatory provisions also cover details as to the time of contraction of the disease, as well as procedure, etc.

The subject of compensating for silicosis was also considered by Montana. In that State the legislature adopted a petition (S. J. M. No. 14) calling upon the Congress of the United States to provide for benefits for those disabled by silicosis under the social-security law and to provide grants-in-aid to States enacting a silicosis compensation law. By chapter 127, the Legislature of Montana authorized the creation of a division of industrial hygiene in the State board of health. The act also requires the reporting of occupational diseases and provides for the inspection of places where occupational diseases may occur.

In New Hampshire and Oregon the legislatures authorized the appointment of special committees to study the advisability of extending coverage to employees contracting occupational diseases.

Including the new laws passed in 1939, there are now 30 jurisdictions (laws) compensating for occupational diseases.[2] The diseases covered in the new occupational-disease laws are as follows:

Arkansas.—Poisoning (by arsenic, benzol, cadmium, carbon bisulphide, carbon monoxide, chlorine, cyanide, formaldehyde, halogenated hydrocarbons, hydrochloric acid, hydrofluoric acid, hydrogen sulphide, lead, manganese, mercury, methanol (wood alcohol), methanol chloride, nitrous fumes, nitric acid, petroleum or petroleum products, phosphorous, sulphuric acid, sulphuric dioxide, zinc); anthrax; blisters; synovitis, tenosynovitis, or bursitis; chrome ulceration; compressed-air illness; dermatitis; exposure to X-rays or radioactive substances; disease of the eyes caused by electric arc and welding, and cataract in glassworkers; ulceration of the skin or of the corneal surface of the eye in certain cases; glanders; infectious or contagious disease contracted in a hospital or sanatorium; miners' nystagmus; asbestosis; and silicosis.

Idaho.—Poisoning by lead, mercury, arsenic, zinc, or manganese, their preparations or compounds; carbon-monoxide poisoning in any

[2] Arkansas, California, Connecticut, District of Columbia, Delaware, Hawaii, Idaho, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Jersey, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Philippine Islands, Puerto Rico, Rhode Island, Washington, West Virginia, Wisconsin, and United States (civil employees, and longshoremen and harbor workers). For status of occupational-disease legislation prior to 1939, see Bureau of Labor Statistics Bull. No. 652.

process or occupation involving direct exposure to carbon monoxide; poisoning by methanol, carbon bisulphide, hydrocarbon distillates (naphthas and others) or halogenated hydrocarbons, or any preparations containing these chemicals; poisoning by benzol or by nitro, amido, or amido-derivatives of benzol (dinitro-benzol, anilin, and others) or their preparations or compounds; glanders; radium poisoning by or disability caused by radioactive properties of substances or to Roentgen-ray (X-ray); poisoning by or ulceration from chromic acid or bichromate of ammonium, potassium, or sodium or their preparations; ulceration caused by tar, pitch, bitumen, mineral oil, or paraffin, or any compound product, or residue of any of these substances; dermatitis venenata; that is, infection or inflammation of the skin, furunculosis excepted, caused by oils, cutting compounds, lubricants, liquids, fumes, gases, or vapors; anthrax; and silicosis.

Maryland.—Anthrax; lead poisoning or its sequelae; zinc poisoning or its sequelae; mercury poisoning or its sequelae; phosphorous poisoning or its sequelae; arsenic poisoning or its sequelae; poisoning by wood alcohol; poisoning by benzol or nitro-, hydro-, hydroxy- and amido-derivatives of benzene (dinitro-benzol, anilin, and others) or its sequelae; poisoning by carbon bisulphide or its sequelae, or any sulphide; poisoning by nitrous fumes or its sequelae; poisoning by nickel carbonyl or its sequelae; dope poisoning (poisoning by tetrachlor-methane or any substances used as or in conjunction with a solvent for acetate of cellulose or nitro cellulose, or its sequelae); poisoning by formaldehyde and its preparations; hydrocyanic acid poisoning; chlorine poisoning; ammonia poisoning; cadmium poisoning; manganese poisoning; chrome ulceration or dermatitis or their sequelae; epitheliomatous cancer or ulceration of the skin or the corneal surface of the eye, caused by pitch, tar, bitumen, mineral oil, or paraffin, or any compound, product, or residue of any of these substances; glanders; compressed-air illness or its sequelae; miners' diseases, including only cellulitis, bursitis, ankylotomiasis, tenosynovitis and nystagmus; cataract in glassworkers; radium poisoning or disability caused by radioactive properties of substances or to Roentgen-rays (X-rays); poisoning from methyl chloride or other halogenated hydrocarbons; carbon-monoxide poisoning; poisoning by sulphuric hydrochloric or hydrofluoric acid; respiratory, gastro-intestinal or physiological nerve and eye disorders caused by contact with petroleum products and their fumes; disability arising from blisters or abrasions; disability arising from bursitis or synovitis; dermatitis (venenata); silicosis; and asbestosis.

Labor Laws and Court Decisions

RECENT DECISIONS OF INTEREST TO LABOR

Ordinance Restricting Right of Assembly Held Unconstitutional

THE United States Supreme Court, in a 5 to 2 decision, recently sustained a lower court holding invalid several ordinances of Jersey City, N. J., that regulated public meetings and the distribution of literature.[1] Five opinions were rendered. Mr. Justice Roberts delivered the opinion of the Court, which was concurred in by Mr. Justice Black, while Mr. Justices Stone and Reed joined in another opinion which upheld the decree on different grounds. Mr. Chief Justice Hughes rendered a short opinion concurring in the general result. Mr. Justices Butler and McReynolds dissented, while Mr. Justices Frankfurter and Douglas did not participate in the consideration or the decision of this case.

The majority opinion upheld an injunction issued by a Federal District Court of New Jersey restraining officials of Jersey City from interfering with the exercise of constitutional rights, and sustained, with modifications, the decree of the Circuit Court of Appeals affirming the findings of the lower court.[2] In holding the decree proper, Mr. Justice Roberts declared that the Jersey City ordinances controlling public meetings and the distribution of literature are now wholly without effect. The controversy arose in 1937 when the C. I. O. began a membership drive in Jersey City. At that time the city restricted the activities of the sympathizers and even barred them from the city. In many cases, meetings were scheduled to be held for the purpose of discussing the National Labor Relations Act.

The mayor of the city contended that the municipal ordinance was valid and based his contention on an old Supreme Court case which sustained a Boston, Mass., ordinance requiring a permit as a prerequisite to the right to speak in a public park, in this case the Boston Common.[3]

In the course of the opinion, Mr. Justice Roberts said: "Citizenship of the United States would be little better than a name if it did not

[1] *Frank Hague, Individually and as Mayor of Jersey City* v. *Committee for Industrial Organization*, 59 Sup. Ct. 954.

[2] See Monthly Labor Review, April 1939 (p. 881).

[3] *Davis* v. *Massachusetts*, 167 U. S. 43.

carry with it the right to discuss national legislation and the benefits, advantages, and opportunities to accrue to its citizens therefrom."

One of the ordinances provided that no person may distribute on any street or public place, any newspapers, circulars, or pamphlets. As to this ordinance, Mr. Justice Roberts said that it was absolutely void under the recent decision of the Supreme Court in *Lovell* v. *City of Griffin*, 303 U. S. 444. The other ordinance required a permit to hold meetings in the streets and parks of the city. This measure was held by the majority opinion to be void because it could be made, the Court said, "the instrument of arbitrary suppression of free expression of views on national affairs." Mr. Justice Roberts stated that the Massachusetts case was not applicable here. In that case, he pointed out, the ordinance had a different purpose, "for it was not directed solely at the exercise of the right of speech and assembly," but to other activities "not in the nature of civil rights which doubtless might be regulated or prohibited as respects their enjoyment in parks." In the case under consideration the Court said that the New Jersey ordinance related only to the right of assembly "for the purpose of communicating views entertained by speakers" and was not a measure to further public convenience in the use of the streets or parks. In this regard Mr. Justice Roberts said that—

> Wherever the title of streets and parks may rest, they have immemorially been held in trust for the use of the public and, time out of mind, have been used for purposes of assembly, communicating thoughts between citizens, and discussing public questions. Such use of the streets and public places has, from ancient times, been a part of the privileges, immunities, rights, and liberties of citizens.

Continuing, he remarked that—

> The privilege of a citizen of the United States to use the streets and parks for communication of views on national questions may be regulated in the interest of all; it is not absolute, but relative, and must be exercised in subordination to the general comfort and convenience, and in consonance with peace and good order, but it must not, in the guise of regulation, be abridged or denied.

Mr. Justice Stone, in his concurring opinion, took the broader view that freedom of speech and of assembly for any lawful purpose were rights of personal liberty "secured to all persons." He further declared that the Supreme Court had never held that freedom of speech or of assembly was a privilege or immunity peculiar to citizenship of the United States, to which alone the privileges and immunities clause relates. While in general both of the majority opinions aimed at the preservation of constitutional guaranties, Mr. Justice Stone announced that he was unable to rest the decision on the assertion that "respondents must depend upon their limited privileges as citizens" in order to sustain their cause.

Mr. Chief Justice Hughes, in his concurring opinion, agreed with Mr. Justice Roberts as to the right to discuss the National Labor

Relations Act being a privilege of a citizen of the United States, but was not satisfied that the record adequately supported the resting of jurisdiction on that ground. As to that particular matter, he concurred with the opinion of Mr. Justice Stone.

In a dissenting opinion, Mr. Justice McReynolds believed that the lower court should have refused to interfere with the essential rights of the municipality "to control its own parks and streets," and further that "wise management of such intimate local affairs, generally at least, is beyond the competency of Federal courts, and essays in that direction should be avoided." Mr. Justice Butler, in his dissenting opinion, denied that the Jersey City ordinance was "void on its face" and said that in principle it did not differ from the Boston ordinance which was upheld by the Supreme Court..

Ruling on Ratification of Child-Labor Amendment

The United States Supreme Court has ruled that the proposed Federal child-labor amendment to the Constitution is subject to ratification by the States, even though it has been pending for 15 years.[4] The opinion of the Court, written by Mr. Chief Justice Hughes, upheld a decision of the Supreme Court of Kansas to the effect that the concurrence of the State in the child-labor amendment in 1937 was not affected by a previous rejection. In addition to the views expressed by the Chief Justice, separate opinions were delivered by Mr. Justices Black and Frankfurter, and a dissenting opinion was written by Mr. Justice Butler.

The status of the amendment was challenged in both Kansas and Kentucky. In the case of Kentucky, the Court dismissed the appeal upon the ground that the Governor had forwarded the certification of the ratification of the amendment to the Secretary of State of the United States, and the Court said that "there was no longer a controversy susceptible of judicial determination." Mr. Justices Black and Douglas concurred in the dismissal of the appeal in the case of Kentucky on the ground that neither the State nor Federal courts have any jurisdiction to interfere "with the amending process." Mr. Justices Butler and McReynolds, in dissenting, held that the decision of the Court of Appeals of Kentucky should have been affirmed.

The Kansas case involved the question of a previous rejection of the amendment by the State legislature. In 1925 the amendment was rejected, but it was ratified in 1937. The ratification came about through a tie vote in the State senate, which was broken by the affirmative vote of the Lieutenant-Governor. Subsequently, certain members of the senate and house brought proceedings to compel the secretary of state to strike out an endorsement on the resolution to the

[4] *Coleman* v. *Miller*, 59 Sup. Ct. 972; *Chandler* v. *Wise*, 59 Sup. Ct. 992.

effect that it had been adopted by the senate. The right of the Lieutenant-Governor to cast the deciding vote was challenged and the petition set forth that the amendment had been rejected by numerous State legislatures, and further declared that because it had failed of ratification within a reasonable time it had lost its force and effect. The Kansas Supreme Court had sustained the validity of the ratification.

The United States Supreme Court, after rejecting the argument that it had no jurisdiction to hear the case, considered the question of whether the Lieutenant-Governor had a right to participate in the voting when the senate was equally divided. The Chief Justice announced, on this point, that it was a question upon which the Court is equally divided and therefore "expresses no opinion upon that point."

The principal consideration of the Chief Justice was given to the effect of the previous rejection of the amendment and the lapse of time since its submission. It was his view that questions relating to the terms under which legislatures might ratify proposed amendments were political matters, and as to the question of reasonableness of time since Congress proposed the amendment, he stated that this was a matter "within the Congressional province," and not open to judicial review.

In discussing the effect of a previous rejection, the Court called attention to the case of the fourteenth amendment, which was rejected by the legislatures of Georgia, North Carolina, and South Carolina in 1866, only to be ratified by subsequent legislatures. Ohio and New Jersey first ratified and then withdrew their consent, it was said, but on July 20, 1868, the Secretary of State certified that if the Ohio and New Jersey ratifying resolutions were still in effect the amendment had become a part of the Constitution. The next day Congress adopted a concurrent resolution that three-fourths of the States had ratified it, and that the amendment was therefore a part of the Constitution. The Chief Justice observed, in this regard, that the political departments of the Government dealt with the effect of previous rejection as well as attempted withdrawal and determined that "both were ineffectual in the presence of an actual ratification." He further declared in these words that "in accordance with this historic precedent the question of the efficacy of ratifications by State legislatures, in the light of previous rejection or attempted withdrawal, should be regarded as a political question pertaining to the political departments with the ultimate authority in the Congress in the exercise of its control over the promulgation of the adoption of the amendment."

Finally, in upholding the Kansas Supreme Court, the Chief Justice declared that Congress has the final determination of the question whether by lapse of time the proposed amendment "had lost its

vitality prior to the required ratifications." He pointed out that the decision in *Dillon* v. *Gloss* (256 U. S. 368), which held that the Congress had the power to fix a reasonable time for ratification, was not controlling since it did not necessarily follow that, "whenever Congress has not exercised that power, the Court should take upon itself the responsibility of deciding what constitutes a reasonable time and determine accordingly the validity of ratifications."

Mr. Justice Frankfurter, in an opinion concurred in by Mr. Justices Roberts, Black, and Douglas, held that the Supreme Court did not have jurisdiction to consider the Kansas case. The same group of justices agreed, however, in an opinion, delivered by Mr. Justice Black, that since the Court had assumed jurisdiction it should hold the amendment still open to ratification. This opinion declared that undivided control of the amendment process was given to Congress by the Constitution, and "is not subject to judicial guidance, control or interference at any point."

Mr. Justice Butler, delivering a dissenting opinion for himself and Mr. Justice McReynolds, held that more than a "reasonable" time had elapsed between the submission of the proposal by Congress and its adoption by the Kansas Legislature 13 years later. He contended that as the Court had ruled in the case of *Dillon* v. *Gloss* upon the reasonableness of 7 years for ratification of the prohibition amendment, it should not now hold itself "to lack power to decide whether more than 13 years between proposal by Congress and attempted ratification by Kansas is reasonable."

Banks and Insurance Companies Under Unemployment-Compensation Act

The North Carolina Unemployment-Compensation Act has been construed by the State supreme court [5] as covering State banks as well as insurance companies. In the State bank case, the court held the statute to be unconstitutional, insofar as it provided for the payment of contributions in the year in which it was enacted, on the ground that this provision was retroactive. The court, in considering the insurance-company case, also decided that the relationship between the insurance company and its soliciting agents was that of "employment" within the meaning of the statute.

In the first case decided by the Supreme Court of North Carolina, the bank contended that it was exempt from the provisions of the unemployment-compensation act on the theory that it was an instrumentality of the United States by reason of the fact that the bank was a member of the Federal Reserve System. The court was of the opinion, however, that the bank was not an instrumentality of the

[5] *Unemployment Compensation Commission* v. *Wachovia Bank & Trust Co.*, 2 S. E. (2d) 592; *Unemployment Compensation Commission* v. *Jefferson Standard Life Ins. Co.*, 2 S. E. (2d) 584.

United States, since it was a State-created corporation, privately owned and doing business primarily for profit. It was observed in this connection that payment of the tax under the unemployment-compensation act did not impose any economic burden on the Federal Government and did not tend to interfere with the bank in the exercise of its privileges and in the performance of its obligations and duties as a member of the Federal Reserve System. The court also held that membership in the Federal Deposit Insurance Corporation likewise did not exempt the bank from the provisions of the law.

In the other case, an insurance company contended that it was an instrumentality of the United States and therefore exempt from the State law by reason of its membership in a Federal home loan bank. The court declared, however, that the privileges and duties of the insurance company did not constitute it a Federal instrumentality. The court pointed out that there was "a very real distinction between the creation of an agency primarily and fundamentally to discharge a function of the Federal Government, and the grant of incidental powers, functions or duties of the Federal Government to a private enterprise existing primarily for profit." The court also observed that this distinction has been recognized by the Supreme Court of the United States.

"Dismissal" Under State Unemployment-Compensation Act

In a recent case involving the unemployment-compensation law of Wisconsin, the supreme court of the State held that an employee who was deprived of work because the employer had discontinued the manufacture of certain goods was entitled to compensation. The employer stopped work when a union demanded that the wages of the employees be increased. An award of unemployment compensation by the industrial commission was set aside on appeal by the court of first instance, on the ground that the employee had not been dismissed, but had voluntarily quit by reason of the union refusing to permit the employees to work at the existing wage scale.

The supreme court, in overruling the decision of the lower court and upholding the award of the industrial commission, declared that the union did not represent the employee although the factory was operated as a closed shop. It was pointed out that the employee was permitted to work under a temporary permit issued by the union and allowed to continue work without a renewal of the permit. A small sum was deducted from the wages and paid to the union each week by the employer, but the court said that this did not change the employee's status. The employee did not become a member of the union, it was said, and neither the acts of the union nor its contracts with the employer could be considered acts of the employee in the absence of some conduct which could be inferred as consent on the part of the

employee to the bargaining contract or its results. (*Rhea Manufacturing Co.* v. *Industrial Commission*, 285 N. W. 749.)

Picketing of Private Dwelling Held Unlawful

The Supreme Court of Minnesota recently held that the picketing of a private home was unlawful and constituted disorderly conduct, even though there was no violence. The picketing was in protest against the discharge of a private chauffeur and the refusal of the employer to discuss such discharge with a representative of the union. The court declared that the rule permitting peaceful picketing, "to enforce economic demands," did not apply to the picketing of a private dwelling. It was pointed out in this connection that a home, exclusively used as such, was not a place for the carrying on of any industrial or business enterprise.

It was contended that the picketing could be justified under the State Anti-Injunction Act which declares that it is the public policy of the State to give employees "full freedom of association, self-organization, and designation of representatives of their own choosing," and that, in the accomplishment of this purpose, they shall be free from interference or restraint of the employer. The court held, however, that the statute did not apply, as such objectives related wholly to industrial disputes, and the chauffeur could not be considered an industrial employee, and the dispute out of which the picketing arose did not constitute an industrial conflict. (*State* v. *Cooper*, 285 N. W. 903.)

Constitutional Right to Picket

According to a recent decision of the Colorado Supreme Court, peaceful picketing may not be prohibited in that State. The court construed a statute, which prohibited picketing for the purpose of boycotting or obstructing or injuring a business, as not applicable to a case in which a picket merely marched in front of a building carrying a sign stating that the employer was "unfair" to organized labor.

In its decision, the court declared that the statute, if construed as applicable to such picketing, would be unconstitutional, since it would not regulate peaceful picketing but would prohibit it. Such an unqualified prohibition would be contrary, the court said, to "the fundamental principles of liberty and justice which lie at the base of all our civil and political institutions," and therefore would violate the due-process clause of the fourteenth amendment to the Constitution, since it would impair freedom of speech. The court was of the opinion also that the statute could not be sustained as an exercise of the police power. However, it was observed by the court that if, instead of prohibiting peaceful picketing, the statute could be construed as a reasonable regulation of picketing, it would be within the scope of the police power. (*Colorado* v. *Harris*.)

POSTPONEMENT OF ARKANSAS WORKMEN'S COMPENSATION LAW

THE Legislature of Arkansas enacted a compulsory workmen's compensation law on March 15, 1939, applicable to employers with 5 or more employees, with certain enumerated exceptions.[1] The act was to become effective June 8, 1939.

Prior to the effective date of the act a referendum petition, containing more than a sufficient number of signatures, was filed with the secretary of state. As a result of this petition the enforcement of the law will be held in abeyance until the people of the State have an opportunity to vote upon the matter or a special session of the legislature is called by the Governor.

[1] For an analysis of the act, see Monthly Labor Review, May 1939 (p. 1101).

INDUSTRIAL DISPUTES

TREND OF STRIKES

STRIKES in 1939 have increased each month from 164 in January to an estimated 235 in May. The estimate for May represents an increase of approximately 7 percent over the preceding month.

Trend of Strikes, 1933 to May 1939 [1]

Year and month	Number of strikes					Workers involved in strikes		Man-days idle during month or year
	Continued from preceding month	Beginning in month or year	In progress during month	Ended in month	In effect at end of month	Beginning in month or year	In progress during month	
1933		1,695				1,168,272		16,872,128
1934		1,856				1,466,695		19,591,949
1935		2,014				1,117,213		15,456,337
1936		2,172				788,648		13,901,956
1937		4,740				1,860,621		28,424,857
1938		2,772				688,376		9,148,273
1938								
January	120	168	288	159	129	35,329	55,850	473,289
February	129	198	327	180	147	53,175	77,486	514,111
March	147	274	421	246	175	56,759	105,962	767,856
April	175	281	456	261	195	78,666	110,950	838,158
May	195	300	495	290	205	83,029	124,682	1,174,052
June	205	219	424	245	179	52,801	95,854	871,002
July	179	208	387	215	172	50,193	85,672	776,237
August	172	262	434	272	162	48,378	81,052	830,987
September	162	222	384	234	150	96,399	133,357	989,916
October	150	256	406	241	165	52,703	113,074	842,202
November	165	207	372	239	133	43,128	75,445	557,903
December	133	177	310	190	120	37,816	62,160	512,560
1939								
January	120	164	284	161	123	48,671	69,939	512,255
February	123	175	298	179	119	64,742	83,501	536,526
March	119	179	298	168	130	40,783	60,352	583,505
April [1]	130	220	350	210	140	385,000	410,000	5,000,000
May [1]	140	235	375	225	150	66,000	405,000	3,400,000

[1] Strikes involving fewer than 6 workers or lasting less than 1 day are not included in this table nor in the following tables. Notices or leads regarding strikes are obtained by the Bureau from more than 650 daily papers, labor papers, and trade journals, as well as from all Government labor boards. Letters are written to representatives of parties in the disputes asking for detailed and authentic information. Since answers to some of these letters have not yet been received, the figures given for the late months are not final. This is particularly true with regard to figures for the last 2 months, and these should be considered as preliminary estimates.

In both April and May the largest and most important stoppage of work was in the bituminous-coal fields, due to the delay in signing new union contracts after the old ones had expired March 31. This general stoppage, which began April 3 in the Appalachian coal areas and was extended May 5 to the midwest and western fields, continued until May 13 when agreements covering most of the affected areas were

reached. While a total of more than 300,000 men were involved in this stoppage, only around 260,000 were idle during April and from 50,000 to 60,000 stopped work May 5.

The coal stoppage, of course, accounted for a large majority of the workers involved in strikes and the man-days of idleness resulting in April and May. With data for this dispute eliminated, figures for May show roughly the same number of workers involved in strikes as in April, but an increase of about 10 percent in the number of man-days idle.

The figures given for April and May in the preceding table are preliminary estimates based on newspaper reports and other information available as this goes to press. An analysis of strikes in each of these months, based on detailed and verified information, will appear in subsequent issues of the Monthly Labor Review.

ANALYSIS OF STRIKES IN MARCH 1939 [1]

ALTHOUGH there were more strikes in March 1939 than in January or February, there were fewer workers involved than in either of the preceding months. There was a slight increase in man-days idle in March, however, due in part to several fairly large strikes which continued into March from preceding months. The Bureau has received detailed information on 179 strikes which began in March, involving nearly 41,000 workers. The following analysis is based on these strikes plus 119 which continued into March from preceding months, making a total of 298 strikes in progress during all or a part of March, involving more than 60,000 workers.

About 64 percent of the 179 strikes beginning in March were in the following five industry groups: Textiles (28), trade (28), building and construction (25), transportation (17), and domestic and personal service (16). There were more workers (10,900) involved in the transportation industries than in any other group, due to the New England trucking strike. There were 5,300 workers involved in building and construction strikes, 5,000 in textile strikes, and 3,300 in disputes in wholesale and retail trade. The largest numbers of man-days of idleness because of strikes during March were in textiles (110,000), the lumber and allied products industries (83,000), and transportation (59,000).

Southern New England Trucking Strike.—The largest strike during the month of March was called by the International Brotherhood of Teamsters, Chauffeurs, Stablemen & Helpers against trucking firms in Rhode Island, Connecticut, and part of Massachusetts. The strike began in Rhode Island on March 19, after members of the local

[1] Detailed information on a few strikes has not yet been received. (See footnote to preceding table.) Data on missing strikes will be included in the annual report.

union at Providence had ratified and issued a strike order. The principal demand of the union was for a general wage increase with provisions for stipulated additional increases each year to be embodied in the terms of a 3-year contract.

It was doubtful at first whether or not the strike would be extended to areas outside of Providence, although the outcome of the Providence dispute was of vital interest to both the operators and the local unions in the 9 local areas into which the southern New England district is divided. (Greater Boston is not included.) A large number of employers from the entire district met in Providence on March 21 and pledged support to the Rhode Island operators. A negotiating committee for the employers was given full authority to negotiate for the entire group and it was understood that no contracts were to be made by any of the truck owners until approved by a majority of the owners in the 9 areas.

The strike spread into Connecticut and Massachusetts March 23 when the union called out the drivers of 3 large firms with terminals in a number of cities. These firms were the Consolidated Motor Lines, Inc., Adley Express Co., Inc., and McCarthy Freight System, Inc. The next day a large number of operators not previously involved ordered their trucks from the road and with the continued spread of the strike it was only a few days until an estimated 8,000 workers were involved.

With the threat of a complete tie-up of truck transportation and its effect on industry in general—some textile mills had already begun a curtailment of operations because materials could not be delivered—State and Federal conciliators and the governors of the affected States urged a quick settlement of the dispute and at times participated in the conferences between the disputing parties. On March 24, the Governor of Rhode Island announced a compromise plan which representatives of each side had agreed to submit to their members for ratification. The operators rejected it and offered a substitute plan which in turn was rejected by the union. On April 11 the negotiators submitted another compromise proposal and it was agreed that work should be resumed immediately on a truce basis pending the vote on acceptance of the agreement.

The operators in all areas ratified the agreement within a few days and it was ratified also by eight of the nine local unions involved, the only local union rejecting it being the one at Springfield, Mass.

The new agreement was retroactive to April 11, 1939, the date of the truce, and is to remain in effect for 4 years, expiring in 1943. Wage rates, representing increases for most workers, are stipulated for the first year with increases varying in amount for most of the men during each of the successive years the contract is in force. Wage rates during the fourth year will be uniform in all of the areas

covered. Forty-eight hours constitute a week's work and there is provision for overtime pay at the rate of time and one-half for hours worked in excess of 51 per week. Any hours exceeding 48 per week are considered as overtime, but the first 3 hours of overtime work are paid for at the regular rate. No employee is permitted to report for work after 48 hours have been completed unless permission has been obtained from the union business agent.

A joint administrative board to be known as the Fair Trade Practice Board of the Trucking Industry of New England is provided for in the agreement and consists of seven representatives of the employers and seven representatives of the union. The functions of the board are to administer the provisions of the contract, provide machinery to handle disputes and grievances in order to eliminate strikes and lockouts, and to adopt such measures, rules, and regulations as will in the opinion of its members eliminate from the industry any unfair practice that may exist at present or at any future time. Decisions of the board are final and binding on all parties to the agreement.

TABLE 1.—*Strikes in March 1939, by Industry*

Industry	Beginning in March		In progress during March		Man-days idle during March
	Number	Workers involved	Number	Workers involved	
All industries	179	40,783	298	60,352	583,505
Iron and steel and their products, not including machinery	6	1,351	10	1,635	15,915
Blast furnaces, steel works, and rolling mills	2	829	3	1,008	12,426
Hardware			1	71	1,633
Structural and ornamental metalwork			1	28	756
Tin cans and other tinware	2	423	2	423	698
Wire and wire products	1	9	1	9	126
Other	1	90	2	96	276
Machinery, not including transportation equipment	4	679	6	802	6,349
Foundry and machine-shop products	2	240	2	240	720
Machine tools			1	49	196
Other	2	439	3	513	5,433
Transportation equipment	3	2,034	7	3,433	39,686
Aircraft	1	765	2	1,263	18,093
Automobiles, bodies and parts	2	1,269	4	1,465	5,378
Shipbuilding			1	705	16,215
Nonferrous metals and their products	2	127	6	827	5,605
Jewelry	1	18	2	31	142
Lighting equipment			1	60	1,380
Stamped and enameled ware			2	627	3,865
Other	1	109	1	109	218
Lumber and allied products	6	1,545	16	5,131	82,770
Furniture	2	292	3	313	5,804
Millwork and planing	1	692	4	1,223	25,991
Sawmills and logging camps	2	411	6	3,279	47,637
Other	1	150	3	316	3,338
Stone, clay, and glass products	8	1,248	9	1,290	16,906
Brick, tile, and terra cotta	6	764	7	806	16,072
Glass	1	449	1	449	449
Other	1	35	1	35	385
Textiles and their products	28	5,025	64	9,556	110,113
Fabrics:					
Carpets and rugs	1	2,000	1	2,000	2,060
Cotton goods	2	381	3	881	12,206
Dyeing and finishing textiles	1	85	2	104	1,507
Silk and rayon goods			1	206	5,562
Woolen and worsted goods	1	300	1	300	600
Other	4	774	6	1,539	27,413

TABLE 1.—*Strikes in March 1939, by Industry*—Continued

Industry	Beginning in March		In progress during March		Man-days idle during March
	Number	Workers involved	Number	Workers involved	
Textiles and their products—Continued.					
Wearing apparel:					
Clothing, men's	4	658	5	702	3,242
Clothing, women's	11	396	37	2,337	30,607
Hosiery	2	342	3	478	6,560
Knit goods	1	36	3	356	5,784
Other	1	53	2	653	14,542
Leather and its manufactures	4	406	6	576	5,977
Boots and shoes	2	200	3	300	900
Leather	2	206	3	276	5,077
Food and kindred products	9	1,047	12	1,176	13,335
Baking	1	6	4	135	3,369
Beverages	2	22	2	22	344
Canning and preserving	4	458	4	458	4,006
Slaughtering and meat packing	1	550	1	550	5,550
Other	1	11	1	11	66
Tobacco manufactures	1	24	1	24	48
Cigars	1	24	1	24	48
Paper and printing	4	204	9	1,006	16,217
Paper and pulp			1	237	5,451
Printing and publishing:					
Newspapers and periodicals	2	84	4	593	10,101
Other	2	120	4	176	665
Chemicals and allied products	3	878	8	2,033	15,726
Chemicals	1	18	1	18	36
Fertilizers	1	675	1	675	2,700
Paints and varnishes			1	20	460
Petroleum refining			2	960	10,070
Soap	1	185	1	185	185
Other			2	175	2,275
Rubber products	1	100	2	188	1,948
Other rubber goods	1	100	2	188	1,948
Miscellaneous manufacturing	7	570	15	1,260	18,452
Broom and brush	1	161	1	161	2,737
Furriers and fur factories			1	270	6,210
Other	6	409	13	829	9,505
Extraction of minerals	1	14	4	2,304	4,930
Coal mining, bituminous	1	14	3	804	1,930
Quarrying and nonmetallic mining			1	1,500	3,000
Transportation and communication	17	10,902	20	11,082	59,162
Water transportation	6	1,446	7	1,490	8,125
Motortruck transportation	6	8,407	8	8,543	48,060
Taxicabs and miscellaneous	4	1,043	4	1,043	2,965
Electric railroad	1	6	1	6	12
Trade	28	3,341	37	3,638	38,269
Wholesale	6	322	9	392	2,916
Retail	22	3,019	28	3,246	35,353
Domestic and personal service	16	2,037	24	4,650	42,895
Hotels, restaurants, and boarding houses	8	554	13	2,960	28,774
Laundries	5	417	8	624	7,115
Dyeing, cleaning, and pressing	1	50	1	50	850
Elevator and maintenance workers (when not attached to specific industry)	1	1,000	1	1,000	6,000
Other	1	16	1	16	156
Professional service	1	417	4	548	4,250
Recreation and amusement	1	417	3	541	4,201
Semiprofessional, attendants, and helpers			1	7	49
Building and construction	25	5,347	32	5,661	47,031
Building, exclusive of PWA	11	3,024	14	3,074	25,556
All other construction (bridges, docks, etc., and PWA buildings)	14	2,323	18	2,587	21,475
Agriculture and fishing	1	1,750	1	1,750	31,500
Fishing	1	1,750	1	1,750	31,500
WPA, relief, and resettlement projects	2	1,705	2	1,705	5,115
Other nonmanufacturing industries	2	32	3	77	1,306

There were more strikes in New York (45) in March than in any three other States. There were 17 in Pennsylvania, 12 in California, and 10 in New Jersey. New York was the only State with as many as 5,000 workers involved in strikes during the month. States with the largest number of man-days of idleness because of strikes were New York (62,635), California (59,048), Washington (41,959), and Pennsylvania (37,852).

As shown at the end of table 2, five strikes beginning in March extended into two or more States. The largest of these was the New England trucking strike in Rhode Island, Connecticut, and Massachusetts, described previously.

TABLE 2.—*Strikes in March 1939, by States*

State	Beginning in March		In progress during March		Man-days idle during March
	Number	Workers involved	Number	Workers involved	
All States	179	40,783	298	60,352	583,505
Alabama	1	26	3	535	11,874
Arizona	1	70	1	70	350
Arkansas	2	1,141	2	1,141	13,597
California	12	2,474	17	4,546	59,048
Colorado	2	938	3	947	14,833
Connecticut	1	225	1	225	450
District of Columbia	4	423	7	2,719	25,916
Florida			1	30	30
Georgia	2	322	3	350	1,498
Idaho	1	6	1	6	12
Illinois	8	923	11	1,193	10,898
Indiana	8	1,243	12	3,886	25,620
Iowa	4	346	4	346	2,089
Kansas	1	1,675	1	1,675	5,025
Louisiana	1	200	1	200	2,200
Maryland	2	736	2	736	844
Massachusetts	7	1,545	10	1,612	10,195
Michigan	5	1,488	6	2,193	20,574
Minnesota	2	1,021	2	1,021	6,084
Missouri	5	1,149	10	1,601	27,075
New Jersey	10	737	23	2,080	26,530
New York	45	6,946	91	8,227	62,635
North Carolina	1	325	1	325	650
Ohio	6	1,177	11	1,898	30,607
Oklahoma			1	800	5,750
Oregon	3	455	4	499	1,533
Pennsylvania	17	1,810	27	3,713	37,852
Rhode Island	1	300	2	506	6,162
South Carolina			1	136	3,672
Tennessee	6	716	6	716	7,888
Texas	3	171	4	331	7,042
Virginia	2	727	2	727	2,804
Washington	5	1,870	8	3,108	41,959
West Virginia	1	18	1	18	36
Wisconsin	5	324	10	912	20,013
Interstate	5	9,256	8	11,324	90,160

About 61 percent of the strikes beginning in March involved fewer than 100 workers each, 28 percent involved from 100 up to 500 workers each, 7 percent involved from 500 up to 1,000 workers each, and in each of 8 strikes (4 percent) 1,000 or more workers were involved. The strike of New England truck drivers was the only one in which more than 5,000 workers were involved.

TABLE 3.—*Strikes Beginning in March 1939, Classified by Number of Workers Involved*

Industry group	Total	Number of strikes in which the number of workers involved was—					
		6 and under 20	20 and under 100	100 and under 500	500 and under 1,000	1,000 and under 5,000	5,000 and under 10,000
All industries	179	44	65	50	12	7	1
Manufacturing							
Iron and steel and their products, not including machinery	6	1	1	3	1		
Machinery not including transportation equipment	4	2		2			
Transportation equipment	3		1		1	1	
Nonferrous metals and their products	2	1		1			
Lumber and allied products	6		2	3	1		
Stone, clay, and glass products	8	1	4	2	1		
Textiles and their products	28	5	13	8	1	1	
Leather and its manufactures	4		1	3			
Food and kindred products	9	4	2	2	1		
Tobacco manufactures	1		1				
Paper and printing	4		4				
Chemicals and allied products	3	1		1	1		
Rubber products	1			1			
Miscellaneous manufacturing	7	3	1	3			
Nonmanufacturing							
Extraction of minerals	1	1					
Transportation and communication	17	5	4	5	1	1	1
Trade	28	9	11	6	2		
Domestic and personal service	16	6	6	3		1	
Professional service	1			1			
Building and construction	25	4	12	6	2	1	
Agriculture and fishing	1					1	
W. P. A., relief, and resettlement projects	2		1			1	
Other nonmanufacturing industries	2	1	1				

Union-organization matters, recognition, closed shop, discrimination, etc., were the major issues in 60 percent of the strikes beginning in March. These strikes included about 41 percent of the total workers involved. Wages and hours, principally demands for wage increases, were the major issues in 22 percent of the strikes, including 45 percent of the total workers. In 18 percent of the strikes, including 14 percent of the total workers involved, the causes were rivalry between different unions or factions, questions of jurisdiction, and various specific grievances over such matters as collection of back pay, work load, classification of work, and change in work schedule. There were also three small sympathetic strikes.

Of the 298 strikes in progress during March, 168 were terminated during the month. The average duration of these 168 strikes was about 19 calendar days. Approximately 40 percent of them were terminated in less than 1 week after they began, 39 percent lasted from a week up to 1 month, and 21 percent had been in progress for a month or more before they were terminated. Included in the latter group were six strikes which had been in progress for 3 months or more. The largest of these was the newspaper strike of the American

Newspaper Guild in Wilkes-Barre, Pa., which had been in progress since October 1938. The strike was originally called October 1 against four newspapers—Times-Leader, Evening News, Record, and Sunday Independent—when efforts to obtain a new agreement had failed. An agreement with the Sunday Independent was signed November 28 but the strike continued against the other three papers until March 23 when agreements were signed providing for a modified closed shop, a 5-day, 40-hour week after September 4, 1939 (a 6-day, 40-hour week until then), severance pay of from 1 to 20 weeks depending on length of service, and 2 weeks' vacation after 1 year of service. Disputed wage scales were left to arbitration.

TABLE 4.—*Major Issues Involved in Strikes Beginning in March 1939*

Major issue	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
All issues	179	100.0	40,783	100.0
Wages and hours	40	22.3	18,474	45.3
Wage increase	23	12.7	12,859	31.6
Wage decrease	5	2.8	1,017	2.5
Wage increase, hour decrease	7	3.9	3,028	7.4
Wage decrease, hour increase	1	.6	1,500	3.7
Hour increase	1	.6	16	(1)
Hour decrease	3	1.7	54	.1
Union organization	107	59.8	16,612	40.7
Recognition	30	16.8	3,513	8.6
Recognition and wages	21	11.7	3,197	7.8
Recognition and hours	1	.6	36	.1
Recognition, wages, and hours	14	7.8	829	2.0
Closed or union shop	24	13.4	4,268	10.5
Discrimination	11	6.1	2,171	5.3
Other	6	3.4	2,598	6.4
Miscellaneous	32	17.9	5,697	14.0
Sympathy	3	1.7	70	.2
Rival unions or factions	3	1.7	151	.4
Jurisdiction	7	3.9	977	2.4
Other	18	10.0	4,492	11.0
Not reported	1	.6	7	(1)

[1] Less than a tenth of 1 percent.

Government officials or boards assisted in negotiating settlements for about half of the workers involved in strikes which ended in March. About 30 percent of the strikes, including 39 percent of the workers involved, were settled by direct negotiations between employers and representatives of organized workers. Eighteen percent of the strikes, which included a little less than 9 percent of the total workers, were terminated without formal settlements. In most of these cases the strikers resumed work without obtaining a settlement of the disputed issues or they lost their jobs entirely when the employers replaced them with new workers, moved, or went out of business.

TABLE 5.—*Duration of Strikes Ending in March 1939*

Industry group	Total	Number of strikes with duration of—					
		Less than 1 week	1 week and less than ½ month	½ and less than 1 month	1 and less than 2 months	2 and less than 3 months	3 months or more
All industries	168	68	30	35	27	2	6
Manufacturing							
Iron and steel and their products, not including machinery	5	3	1				1
Machinery, not including transportation equipment	4	1	1			1	
Transportation equipment	5	2	1	1	1		
Nonferrous metals and their products	4	1	1	2			
Lumber and allied products	7	2	1	1	2		1
Stone, clay, and glass products	4	1	1	1	1		
Textiles and their products	33	11	5	6	11		
Leather and its manufactures	4	2	1				1
Food and kindred products	6	3	1	2			
Tobacco manufactures	1	1					
Paper and printing	6	2		1	2		1
Chemicals and allied products	3	1		2			
Rubber products	1						1
Miscellaneous manufacturing	7	2	2	1	2		
Nonmanufacturing							
Extraction of minerals	4		1	3			
Transportation and communication	13	8	4	1			
Trade	19	11	1	3	3		1
Domestic and personal service	16	7	4	2	3		
Professional service	2		1			1	
Building and construction	21	8	4	7	2		
Agriculture and fishing	1			1			
WPA, relief, and resettlement projects	2	2					

TABLE 6.—*Methods of Negotiating Settlements of Strikes Ending in March 1939*

Negotiations toward settlements carried on by—	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
Total	168	100.0	33,292	100.0
Employers and workers directly	3	1.8	355	1.1
Employers and representatives of organized workers directly	51	30.4	12,894	38.7
Government officials or boards	80	47.5	16,524	49.7
Private conciliators or arbitrators	3	1.8	639	1.9
Terminated without formal settlement	30	17.9	2,874	8.6
Not reported	1	.6	6	(1)

[1] Less than 1/10 of 1 percent.

Results of the 168 strikes ending in March are indicated in tables 7 and 8, the latter showing results in relation to the major issues involved. About 37 percent of the strikes, including 29 percent of the workers involved, resulted in the workers obtaining substantially all that they had demanded; about 36 percent of the strikes, including 50 percent of the workers, resulted in partial gains or compromise settlements; and in 17 percent of the strikes the 12 percent of the total workers involved gained little or nothing.

The strikes over wages and hours were more successful from the workers' viewpoint than the disputes over union-organization matters.

The workers substantially won 42 percent of the wage-and-hour strikes and obtained compromise settlements in 58 percent. None of these strikes were considered definitely lost. Of the union-organization strikes, the workers substantially won 42 percent, obtained compromise settlements as a result of 35 percent, and in 21 percent gained little or nothing.

Of the workers involved in the strikes over wages and hours, 49 percent obtained substantially all that was demanded and 51 percent obtained compromise settlements. Of the workers involved in the disputes over union-organization matters, 28 percent substantially won what was demanded, 62 percent obtained compromise settlements, and 10 percent gained little or nothing.

TABLE 7.—*Results of Strikes Ending in March 1939*

Result	Strikes		Workers involved	
	Number	Percent of total	Number	Percent of total
Total	168	100.0	33,292	100.0
Substantial gains to workers	62	36.8	9,674	29.1
Partial gains or compromises	60	35.7	16,463	49.5
Little or no gains to workers	29	17.3	3,942	11.8
Jurisdiction, rival union, or faction settlements	10	6.0	3,045	9.1
Indeterminate	4	2.4	127	.4
Not reported	3	1.8	41	.1

TABLE 8.—*Results of Strikes Ending in March 1939, in Relation to Major Issues Involved*

Major issue	Total	Strikes resulting in—					
		Substantial gains to workers	Partial gains or compromises	Little or no gains to workers	Jurisdiction, rival union, or faction settlements	Indeterminate	Not reported
	Number of strikes						
All issues	168	62	60	29	10	4	3
Wages and hours	33	14	19				
Wage increase	19	8	11				
Wage decrease	5	2	3				
Wage increase, hour decrease	6	2	4				
Hour increase	1	1					
Hour decrease	2	1	1				
Union organization	105	44	37	22		1	1
Recognition	32	13	7	11		1	
Recognition and wages	21	8	10	3			
Recognition and hours	1			1			
Recognition, wages, and hours	14	9	3	1			1
Closed or union shop	23	8	11	4			
Discrimination	8	3	3	2			
Other	6	3	3				
Miscellaneous	30	4	4	7	10	3	2
Sympathy	3	1	1	1			
Rival unions or factions	6				6		
Jurisdiction	4				4		
Other	15	3	3	6		3	
Not reported	2						2

TABLE 8.—*Results of Strikes Ending in March 1939, in Relation to Major Issues Involved*—Continued

Major issue	Total	Strikes resulting in—					
		Substantial gains to workers	Partial gains or compromises	Little or no gains to workers	Jurisdiction, rival union, or faction settlements	Indeterminate	Not reported
	Number of workers involved						
All issues	33,292	9,674	16,463	3,942	3,045	127	41
Wages and hours	8,837	4,353	4,484				
Wage increase	6,235	3,532	2,703				
Wage decrease	319	274	45				
Wage increase, hour decrease	2,229	515	1,714				
Hour increase	16	16					
Hour decrease	38	16	22				
Union organization	16,829	4,661	10,407	1,741		14	6
Recognition	3,324	1,528	848	934		14	
Recognition and wages	2,656	1,114	1,153	389			
Recognition and hours	36			36			
Recognition, wages, and hours	853	282	545	20			6
Closed or union shop	4,216	420	3,699	97			
Discrimination	2,220	178	1,777	265			
Other	3,524	1,139	2,385				
Miscellaneous	7,626	660	1,572	2,201	3,045	113	35
Sympathy	70	23	7	40			
Rival unions or factions	2,149				2,149		
Jurisdiction	896				896		
Other	4,476	637	1,565	2,161		113	
Not reported	35						35

ACTIVITIES OF UNITED STATES CONCILIATION SERVICE, MAY 1939

THE United States Conciliation Service, in May, disposed of 288 situations involving 514,367 workers. The services of this agency were requested by the employees, employers, and other interested parties.

Of these situations, 146 were strikes, threatened strikes, lockouts, and controversies, involving 505,108 workers. The remaining situations, involving 9,259 workers, were services rendered, such as filling requests for information, adjusting complaints, holding conferences regarding labor conditions, etc.

The facilities of the Service were used in 25 major industrial fields, such as building trades and the manufacture of foods, iron and steel, textiles, etc. (table 1), and were utilized by employees and employers in 39 States, Alaska, and the District of Columbia (table 2).

TABLE 1.—*Situations Disposed of by U. S. Conciliation Service, by Industries, May 1939*

Industry	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All industries	146	505,108	142	9,259	288	514,367
Agriculture	1	1,100	1	1	2	1,101
Automobile	7	276	3	5	10	281
Building trades	16	13,535	18	18	34	13,553
Chemicals	1	2	2	464	3	466
Communication	1	170	2	11	3	181
Domestic and personal	6	1,339	4	4	10	1,343
Food	13	13,894	10	2,840	23	16,734
Iron and steel	12	1,629	2	2	14	1,631
Leather	1	4	3	8	4	12
Lumber	11	3,355	3	8	14	3,363
Machinery	9	2,295	6	77	15	2,372
Maritime	4	3,863	4	21	8	3,884
Mining	6	440,078	4	13	10	440,091
Motion pictures			1	1	1	1
Nonferrous metal	3	3,031	2	154	5	3,185
Paper and printing	7	507	5	5	12	512
Petroleum	1	1	1	12	2	13
Professional	1	20			1	20
Rubber	4	229			4	229
Stone, clay, and glass	8	702	4	303	12	1,005
Textile	13	6,992	18	3,694	31	10,686
Tobacco	1	4,030	2	2	3	4,032
Trade	11	1,397	7	22	18	1,419
Transportation	6	4,383	11	11	17	4,394
Utilities	1	1,700			1	1,700
Unclassified	2	576	29	1,583	31	2,159

TABLE 2.—*Situations Disposed of by U. S. Conciliation Service, by States, May 1939*

State	Disputes		Other situations		Total	
	Number	Workers involved	Number	Workers involved	Number	Workers involved
All States	146	105,108	142	9,259	288	514,367
Alabama	3	205	4	4	7	209
Alaska			1	60	1	60
Arkansas	2	30	2	2	4	32
Arizona			1	1	1	1
California	4	3,273	17	544	21	3,817
Connecticut			2	750	2	750
District of Columbia	6	557	10	87	16	644
Florida	2	97	1	1	3	98
Georgia	1	38	2	501	3	539
Idaho			1	1	1	1
Illinois	14	1,879	17	246	31	2,125
Indiana	4	376	4	63	8	439
Iowa	5	1,007	1	38	6	1,045
Kansas	1	2			1	2
Kentucky	1	30	3	62	4	92
Louisiana	3	1,210	1	1	4	1,211
Maine			1	250	1	250
Maryland	1	10,000	3	3	4	10,003
Massachusetts	3	358	6	3,478	9	3,836
Michigan	3	208	5	5	8	213
Minnesota	2	205	3	3	5	208
Missouri	4	6,270	3	3	7	6,273
Mississippi	1	67			1	67
New Mexico	2	1,300			2	1,300
New Jersey	13	6,869	2	2	15	6,871
New York [1]	9	441,162	16	341	25	441,503
North Carolina			5	1,300	5	1,300
North Dakota	1	100			1	100
Oklahoma	1	154			1	154
Ohio	17	4,792	6	468	23	5,260
Oregon			1	1	1	1
Pennsylvania	20	3,457	7	12	27	3,469
Rhode Island	1	18			1	18
South Carolina	2	1,100			2	1,100
Tennessee	6	1,576	5	422	11	1,998
Texas	3	1,208			3	1,208
Virginia	2	4,315			2	4,315
Washington	2	12,555	6	306	8	12,861
West Virginia	2	239	3	52	5	291
Wisconsin	5	451	2	251	7	702
Wyoming			1	1	1	1

[1] Bituminous-coal situation was listed at New York for record purposes only.

INDUSTRIAL DISPUTES IN GREAT BRITAIN AND NORTHERN IRELAND, 1938

ABOUT 275,000 workers were involved either directly or indirectly in labor disputes resulting in stoppages of work in Great Britain and Northern Ireland during 1938. A review of strikes and lock-outs appearing in the Ministry of Labor Gazette for May 1939 also showed that the position was more favorable than in 1937 when 610,000 persons were affected. The aggregate time lost because of disputes in 1938 was 1,334,000 working days as compared with 3,413,000 days in the preceding year, and the number of stoppages beginning during the year was 875 in 1938 and 1,129 in 1937. Of the disputes commencing in 1937, 10 were still in progress in 1938.

The number of disputes reported as beginning in 1937 and 1938 in Great Britain and Northern Ireland, and the number of workpeople involved in, and the aggregate duration of, all disputes in progress in both years, are shown in table 1, by industries.

TABLE 1.—*Industrial Dispute Statistics by Industry, Great Britain and Northern Ireland, 1937 and 1938*

Industry	Industrial disputes in 1938			Industrial disputes in 1937		
	Number beginning in year	Workers involved	Aggregate working days lost	Number beginning in year	Workers involved	Aggregate working days lost
All industries	875	[1] 275,300	1,334,000	1,129	[1] 610,200	3,413,000
Coal mining	363	173,600	697,000	457	392,500	1,496,000
Other mining and quarrying	11	700	4,000	13	1,000	5,000
Brick, pottery, glass, chemical	21	3,000	24,000	37	2,500	19,000
Engineering and shipbuilding	76	31,100	155,000	123	91,400	693,000
Iron and steel and other metal	62	13,100	88,000	97	16,700	85,000
Cotton	12	1,000	8,000	30	5,600	24,000
Other textile	30	6,200	76,000	54	17,600	132,000
Clothing	36	6,700	33,000	33	10,000	72,000
Food, drink, and tobacco	20	4,100	12,000	18	2,000	6,000
Woodworking, furniture	34	1,900	32,000	60	2,900	31,000
Paper, printing	4	100	1,000	10	1,400	7,000
Building, public works, contracting	110	13,900	115,000	98	7,800	39,000
Transport	49	14,500	40,000	50	52,600	748,000
Commerce, distribution, and finance	19	2,100	10,000	12	1,000	10,000
All other industries	28	3,300	39,000	37	5,200	46,000

[1] Workers are counted in the totals for each year as many times as they were involved in a dispute during the year. The duplication is slight except in the statistics for the coal-mining industry.

The total number of disputes which led to stoppages of work in 1938 was larger than in any year since 1920, with the exception of 1937. However, the aggregate duration of such disputes was lower in 1938 than in any year since 1893, when statistics were first compiled on the present basis, except in 1927, 1933, and 1934. Disputes involved only the employees of a single firm in the large majority of cases in 1938, and most of them lasted less than 1 week. Of the total number of workpeople affected by the disputes, 63,400 were indirectly involved in 1938 and 211,500 in 1937.

Stoppages in the coal-mining industry accounted for 41 percent of the total number of disputes, 63 percent of the workers involved, and 52 percent of the aggregate duration. No disputes of major importance occurred during 1938, and only two involved more than 5,000 persons, of which one was in the coal industry and the other in aircraft manufacture. In addition three stoppages in individual mines involving comparatively few workers were so prolonged that 100,000 working days were lost in one instance, and 90,000 days each in the two others. Disputes in the building and public-works-contracting industries were the most numerous after those in mining.

The causes and results of stoppages in 1938, also the number and percentage of disputes and workers involved, are shown in table 2. Where disputes arose from more than one cause they have been classified by the principal cause.

TABLE 2.—*Causes and Results of Industrial Disputes, Great Britain and Northern Ireland, 1938*

Principal cause	Disputes in 1938				Number of workers involved in disputes—in which results were—		
	Number beginning in year	Percent of total	Workers directly involved	Percent of total	In favor of workers	In favor of employers	Compromises
All causes	875	100.0	211,000	100.0	44,700	113,200	53,100
Wage questions	339	38.7	66,100	31.3	6,800	36,200	23,100
Wage increases	139	15.9	25,500	12.1	2,300	11,100	12,100
Wage decreases	34	3.9	4,300	2.0	400	1,000	2,900
Other wage questions	166	18.9	36,300	17.2	4,100	24,100	8,100
Hours of labor	41	4.7	6,900	3.3	300	3,300	3,300
Employment of particular classes of persons	257	29.4	59,800	28.3	8,200	35,500	16,100
Other working arrangements, rules, and discipline	130	14.8	34,400	16.3	6,400	22,600	5,400
Trade-unionism	92	10.5	34,500	16.4	23,000	7,600	3,900
Sympathetic action	11	1.3	6,300	3.0	.....	5,300	1,000
Other questions	5	.6	3,000	1.4	.....	2,700	300

Wage questions accounted for 31.3 percent of the workers directly involved in disputes in 1938 and employment of particular classes of persons for another 28.3 percent. Trade-unionism and working arrangements, rules and discipline, each affected over 16 percent of the total.

Disputes involving 53.6 percent of the workers were settled in favor of employers. Of the employees 21.2 percent were successful in obtaining their demands. In disputes involving 25.2 percent of the total the settlement made was a compromise.

The principal methods by which settlements were reached are given in table 3 for the year 1938. Both the distribution of disputes and number of workers directly involved are included.

TABLE 3.—*Method of Settling Industrial Disputes, Great Britain and Northern Ireland, 1938*

Method of settlement	Disputes beginning in 1938		Workers directly involved	
	Number	Percent of total	Number	Percent of total
Direct negotiation	524	59.9	130,600	61.9
Conciliation	61	7.0	13,200	6.3
Arbitration	6	.7	200	.1
Return to work on employers' terms, without negotiation	233	26.6	63,500	30.1
Replacement of workers	39	4.4	1,500	.7
Closing of plants	6	.7	1,900	.9
Other	6	.7	100	.0
Total	875	100.0	211,000	100.0

As in earlier years, direct negotiation between the parties or their representatives was the leading means of settling disputes involving stoppages in 1938, 59.9 percent of the disputes, affecting 61.9 percent of the workers, being settled by this method. Disputes in which work was resumed on the employers' terms, without negotiation, accounted for 26.6 percent of the number of disputes and 30.1 percent of the workers directly affected.

Wages and Hours of Labor

ANNUAL EARNINGS IN RADIO MANUFACTURE, 1936 [1]

AVERAGE annual earnings in 1936 in 17 radio-manufacturing plants employing about one-sixth of the total workers in the industry were $1,199 for wage earners whose employment extended throughout the year. Those who had employment for 9 months or more averaged $1,048. When the group was enlarged to include employees who worked at least 6 months the average fell to $922. For the whole number who worked any part of the year the average was $828. These wage earners were those on the pay rolls of the factories studied in August 1937, and the data relate to their earnings for 1936 in these plants only.

Scope and Method of Study

During the latter part of 1937, the Bureau of Labor Statistics made a survey of wages and hours in the radio-manufacturing industry.[2] The survey covered the making of receiving sets, parts (exclusive of cabinets), and tubes. The information obtained was for a pay-roll period during August 1937. As part of this survey, the Bureau also collected data on annual earnings and number of pay-roll periods worked for the calendar year 1936.

The wages and hours survey was conducted on the basis of a sample, which included 59 establishments with 28,555 wage earners. In terms of workers, the coverage represented approximately one-half of the estimated employment in the industry. The sample was carefully selected to make it thoroughly representative of the total industry. Among the factors considered were product, corporate affiliation, size of plant, geographical distribution, and unionization.

Because of the time required to compile data for each worker covering all pay-roll periods in a given year, such information was obtained only for those plants having the figures available in summary form at the end of the year. As a result, the coverage for annual earnings is considerably lower than that for wages and hours generally. In this survey, the 17 establishments from which annual earnings

[1] Prepared by J. Perlman, O. R. Mann, and D. L. Helm of the Bureau's Division of Wage and Hour Statistics.

[2] See Monthly Labor Review, August 1938, pp. 363-377. A similar report in greater detail was published in mimeographed form.

were collected supplied information on wages and hours for 9,710 wage earners, or approximately one-sixth of the estimated number employed in the radio-manufacturing industry.

In view of the fact that the sample for annual earnings was determined largely by the availability of data, it was not so well balanced as that used for wages and hours. On the other hand, the annual-earnings sample was fairly well distributed from the standpoint of the various factors considered. Of the 17 plants, 5 made complete receiving sets and the remaining 12 manufactured parts and tubes only. The companies ranged in size from those with fewer than 100 employees to the largest firms in the industry. Geographically, the establishments were distributed over 8 different States, namely Connecticut, Indiana, Illinois, Massachusetts, New Jersey, New York, Ohio, and Pennsylvania. Both union and nonunion plants were represented in the sample.

Since the figures were obtained from employers' records, they covered only the total earnings and number of pay-roll periods [3] in 1936 of each wage earner *in the establishment in which he worked during August 1937*, or the month including the pay-roll period covered by the wages and hours data. In other words, the data do not include the earnings of an individual in other plants in which he may have worked during the year. This limitation of the data was overcome to some extent by classifying the wage earners according to the number of months worked in the establishment in which they were employed during August 1937; the employees were accordingly separated into four groups—those whose work extended over (1) 12 months, (2) 9 months or more, (3) 6 months or more, and (4) any part of the year.

It is obvious that for employees who worked in the same plant throughout the year, the figures obtained by the Bureau cover their total annual earnings in 1936. The same is substantially true of those who worked 9 months or more in the same establishment, because in most instances the opportunities for such persons to obtain employment in other plants are very small. On the other hand, no such reliance may be placed on the data when the group is enlarged to include those whose work period was as low as 6 months, although, in view of the seasonal nature of the industry as well as other factors, many of these employees worked that year only in the establishment in which they were scheduled. The least reliable figures are those for employees who worked any part of the year, this group including a large number of wage earners who quite likely obtained employment in other plants during 1936.

The annual data for a given establishment obtained here covered only those employees working in 1936 who appeared on the pay roll

[3] The number of pay-roll periods during which an employee worked by no means indicates the actual number of hours worked by him during the year. Thus, an employee is credited here with having worked during a pay-roll period even if he worked only a very short time.

during August 1937. Of the 9,710 workers for whom wages and hours data were collected in August 1937, as many as 7,051 worked some part of 1936 in the same plant in which they were scheduled for wages and hours. Hence, the survey does not include employees, working any part of 1936, who left the employ of the establishment during that year or the first 7 months of 1937.[4] However, experiment has shown that the inclusion of all who worked in 1936 would not have affected the results materially.

The proportion of employees whose work extended over 12 months, 9 months or more, and 6 months or more, to those who worked any part of the year, throws some light on labor turn-over in the various plants covered. In view of the seasonal fluctuations in the industry, the ratio of those who worked throughout the year is relatively lower here than in some other industries. This has a tendency of increasing the average annual earnings of that group, which is composed to a considerable extent of working foremen and the more skilled and efficient employees.

Naturally the annual earnings of employees depend considerably upon the industry's activity during the year. Employment in the radio-manufacturing industry was greater in 1936 than in any year since 1929; and although total pay rolls lagged considerably behind employment, nevertheless they exceeded those of any year since 1930. Using 1923–25 as a base or 100, employment reached an index of 168.1 and pay rolls an index of 136.8.[5] In radio manufacturing, annual earnings are also affected by the seasonal nature of the industry. During 1936, activity increased during the spring months, with a small drop in July; there was another seasonal rise in the late summer and fall months; and a decrease in the late fall and winter months.

Average Annual Earnings, by Plants

Because of the inequalities existing in the sample, it is important first to view the annual data on an establishment basis. The figures by plants are presented in table 1.

The proportion of employees having work during all 12 months ranged in the various establishments from less than 1 percent to 62.7 percent of the total who had some work during the year. In 8 of the 17 plants, the ratio was less than 25 percent, and in all but 3 was less than 50 percent. As noted before, in addition to ordinary labor turn-over, many of these relatively low proportions may be attributed to the seasonality of the industry.

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[4] This procedure was followed by the Bureau in order to eliminate the necessity of using a separate schedule and punch card for the annual data, which would also make it difficult to correlate the latter information with that covering wages and hours during August 1937.

[5] Based upon data, compiled by the Bureau's Division of Employment Statistics, which cover radio apparatus and phonographs, the definition of which differs somewhat from that used in this survey. (See footnote on p. 364, Monthly Labor Review, August 1938.)

TABLE 1.—*Average Annual Earnings in 17 Radio-Manufacturing Plants, by Produc and Sex, 1936*

Division of industry and sex	Relative number of employees whose work extended over—				Average annual earnings of employees whose work extended over—			
	12 months	9 months or more	6 months or more	Any part of year	12 months	9 months or more	6 months or more	Any part of year
Radio sets								
Plant No. 1	20.9	63.0	87.2	100.0	$1,408	$1,095	$963	$876
Males	33.5	65.3	83.8	100.0	1,556	1,404	1,264	1,108
Females	9.1	60.8	90.3	100.0	903	787	704	660
Plant No. 2	17.4	59.5	70.2	100.0	990	804	749	577
Males	29.3	63.8	72.4	100.0	1,022	900	852	664
Females	6.3	55.6	68.3	100.0	857	702	649	496
Plant No. 3	22.1	53.6	65.7	100.0	1,353	1,014	926	698
Males	48.8	71.3	82.9	100.0	1,519	1,371	1,274	1,115
Females	9.3	45.2	57.4	100.0	934	745	686	499
Plant No. 4	23.3	67.8	96.6	100.0	1,370	1,184	1,015	992
Males	33.4	77.4	96.9	100.0	1,474	1,394	1,260	1,232
Females	11.2	56.3	96.3	100.0	997	838	720	705
Plant No. 5	43.4	65.4	87.1	100.0	1,313	1,136	982	888
Males	61.3	76.3	90.1	100.0	1,392	1,318	1,219	1,131
Females	14.6	47.8	82.2	100.0	786	667	561	495
Radio tubes and parts								
Plant No. 1	42.4	58.9	79.7	100.0	1,071	1,039	912	783
Males	37.1	54.5	71.2	100.0	1,548	1,500	1,345	1,057
Females	43.9	60.1	82.1	100.0	957	921	806	706
Plant No. 2	.5	80.7	86.1	100.0	1,555	739	718	652
Males	4.0	86.0	90.0	100.0	1,555	1,259	1,239	1,152
Females	-------	79.9	85.6	100.0	-------	664	645	585
Plant No. 3	52.9	70.6	82.9	100.0	1,192	1,080	1,001	867
Males	55.7	65.8	79.5	100.0	1,395	1,338	1,213	1,011
Females	48.1	78.6	88.5	100.0	799	719	684	625
Plant No. 4	62.7	78.4	94.1	100.0	916	867	793	756
Males	69.2	84.6	88.5	100.0	1,035	980	966	874
Females	56.0	72.0	100.0	100.0	763	730	634	634
Plant No. 5	41.3	63.3	88.0	100.0	999	913	788	720
Males	41.0	57.6	82.1	100.0	1,197	1,089	922	798
Females	41.5	68.0	93.0	100.0	834	786	688	655
Plant No. 6	32.0	72.0	76.0	100.0	1,038	883	861	701
Males	42.1	78.9	84.2	100.0	1,038	942	913	813
Females	-------	50.0	50.0	100.0	-------	589	589	349
Plant No. 7	41.3	57.9	80.2	100.0	977	911	791	680
Males	40.1	58.6	76.4	100.0	1,327	1,192	1,062	875
Females	42.1	57.5	82.5	100.0	769	733	635	559
Plant No. 8	31.9	57.9	68.1	100.0	1,065	913	850	646
Males	37.1	57.1	69.5	100.0	1,311	1,158	1,054	814
Females	27.7	58.5	66.9	100.0	798	720	679	509
Plant No. 9	19.8	37.2	71.9	100.0	845	750	606	493
Males	33.3	58.3	83.3	100.0	1,054	955	835	724
Females	16.5	32.0	69.1	100.0	741	657	538	435
Plant No. 10	16.5	43.4	80.0	100.0	1,239	1,037	825	708
Males	18.9	42.6	83.7	100.0	1,602	1,326	1,012	908
Females	14.7	44.0	77.2	100.0	896	831	676	561
Plant No. 11	61.5	79.8	96.2	100.0	1,254	1,153	1,052	1,019
Males	63.8	81.2	97.4	100.0	1,303	1,261	1,101	1,080
Females	46.3	70.7	87.8	100.0	806	748	694	617
Plant No. 12	13.0	54.6	69.4	100.0	949	750	682	544
Males	32.3	67.7	80.6	100.0	1,053	907	841	728
Females	5.2	49.4	64.9	100.0	690	664	603	469

Employees whose work was spread over 9 months or more ranged from 37.2 percent to as much as 80.7 percent of all who had work, being less than 50 percent in 2 and over 75 percent in 3 establishments. In other words, in two-thirds of the plants (12 out of 17), the proportion was between 50 and 75 percent. The ratio of employees whose work extended over 6 months or more to those who worked any part of the year covered a much narrower range, namely from 65.7 to 96.6 percent. In 10 out of 17 establishments, the figure was in excess of 80 percent.

In most plants, employment was more steady for male than female workers. The proportion of employees who worked throughout the year to the total number was greater for males than females in all but 3 of the 17 establishments, and in a number of cases the difference between the sexes was considerable. The ratio of employees whose work extended over 9 months or more was greater for males than females in all but 5 of the 17 plants, while the proportion of those who worked 6 months or more was greater for males than females in all but 6 establishments. This is largely due to the fact that males fill almost exclusively the nonproductive occupations, such as are found in the maintenance, service, and power departments, in which employment is usually more steady throughout the year.

Of the five plants manufacturing sets, in all but one the average annual earnings were in excess of $1,300 for those whose work was spread over the entire year. By contrast, in all but one of the establishments making parts and tubes the average was below $1,300. For both kinds of plants, the average annual earnings ranged from $845 to $1,555.

The average annual earnings covered a spread from $739 to $1,184 for employees whose work extended over 9 months or more. It should be noted, however, that in all but one of the five plants making sets the average was over $1,000, while the annual earnings of the establishments manufacturing parts and tubes were spread out fairly well over the entire range.

The range in average annual earnings of employees who worked 6 months or more was from $606 to $1,052. In all but one of the plants making sets earnings averaged over $900, while establishments manufacturing parts and tubes were distributed over the entire range. For employees who worked any part of the year, the average annual earnings ranged from $493 to $1,019.

The average annual earnings were substantially higher for males than females in every establishment. For employees who worked throughout the year, earnings of males ranged from $1,022 to $1,602, as compared with $690 to $997 for females. As regards employees whose work extended over 9 months or more, the range was from $900 to $1,500 for males and from $589 to $921 for females. Among employees who worked 6 months or more, the figures range from $835 to $1,345 for males, as against $538 to $806 for females. Lastly, for employees who worked any part of the year, the range was from $664 to $1,232 for males and from $349 to $706 for females.

Annual Earnings of Individual Workers

Table 2 presents the average annual earnings of workers in all plants by product, sex, and skill in 1936.

This table shows again the large differences in average annual earnings between male and female wage earners. For the total industry,

the difference in favor of males amounted to $517 for employees who worked throughout the year, $528 for those who worked 9 months or more, $483 for those who worked 6 months or more, and $455 for those who worked any part of the year.

Table 2 also confirms the fact that average annual earnings are generally higher in plants manufacturing sets than in those making parts and tubes. For all workers, the difference was $258 for employees whose work extended over 12 months, $188 for those who worked 9 months or more, $144 for those who worked 6 months or more, and $180 for those who worked any part of the year.

There are also significant differences in average annual earnings by skill. Among males, the differences were especially pronounced between skilled and semiskilled workers. For the entire industry, the difference in favor of skilled over semiskilled employees was $327 for those working throughout the year, $359 for those working 9 months or more, $393 for those working 6 months or more, and $394 for those working any part of the year. The respective differences in favor of semiskilled over unskilled workers amounted to $69, $90, $73, and $97. The variations in average annual earnings in accordance with skill for the female workers are fairly small.

The distribution of workers according to their annual earnings in 1936, in the industry as a whole and in plants making sets and parts and tubes, by sex and skill, is shown in table 3.

TABLE 2.—*Average Annual Earnings of Workers in Radio Manufacture, by Product, Sex, and Skill, 1936*

Product and sex	Employees whose work extended over—															
	12 months				9 months or more				6 months or more				Any part of the year			
	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
	Number of Workers															
Total industry	2,106	586	1,300	220	4,495	1,052	3,014	429	6,070	1,247	4,223	600	7,051	1,365	4,949	737
Males	1,311	478	684	149	2,270	833	1,172	265	2,873	967	1,558	348	3,253	1,061	1,776	416
Females	795	108	616	71	2,225	219	1,842	164	3,197	280	2,665	252	3,798	304	3,173	321
Radio sets	869	276	478	115	2,256	618	1,390	248	3,119	720	2,045	354	3,465	766	2,299	400
Males	689	256	340	93	1,354	539	646	169	1,672	629	832	211	1,800	672	897	231
Females	180	20	138	22	902	79	744	79	1,447	91	1,213	143	1,665	94	1,402	169
Radio tubes and parts	1,237	310	822	105	2,239	434	1,624	181	2,951	527	2,178	246	3,586	599	2,650	337
Males	622	222	344	56	916	294	526	96	1,201	338	726	137	1,453	389	879	185
Females	615	88	478	49	1,323	140	1,098	85	1,750	189	1,452	109	2,133	210	1,771	152
	Average Annual Earnings															
Total industry	$1,199	$1,480	$1,092	$1,088	$1,048	$1,406	$934	$969	$922	$1,295	$822	$851	$828	$1,211	$736	$734
Males	1,394	1,610	1,283	1,214	1,309	1,547	1,188	1,098	1,176	1,446	1,053	980	1,073	1,351	957	860
Females	877	905	879	823	781	868	772	760	693	772	687	673	618	723	613	571
Radio sets	1,351	1,566	1,259	1,215	1,141	1,457	1,016	1,057	992	1,367	873	914	919	1,308	804	837
Males	1,455	1,609	1,383	1,298	1,369	1,539	1,276	1,181	1,245	1,442	1,140	1,073	1,179	1,375	1,078	1,002
Females	950	(1)	954	(1)	800	897	790	790	698	844	689	680	639	826	629	611
Radio tubes and parts	1,093	1,403	994	949	953	1,332	864	849	848	1,196	774	760	739	1,087	677	612
Males	1,327	1,611	1,185	1,075	1,221	1,561	1,081	953	1,080	1,452	953	836	941	1,309	833	683
Females	856	880	857	804	768	852	760	732	689	737	684	664	602	677	599	527

(1) Workers too few to justify the computation of an average.

TABLE 3.—*Percentage Distribution of Workers in Radio Manufacture, According to Annual Earnings, by Sex and Skill, 1936*

ALL PLANTS

Annual earnings	Percent of employees whose work extended over—							
	12 months				9 months or more			
	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
Both sexes:								
Under $200	(1)			0.5	0.2		0.2	0.5
$200 and under $400	1.6	0.3	2.1	2.3	7.0	1.0	8.9	8.6
$400 and under $600	11.5	6.3	13.2	15.5	25.0	8.2	31.1	23.8
$600 and under $800	24.8	10.9	30.9	24.9	23.3	13.0	26.6	25.9
$800 and under $1,000	20.0	11.3	23.2	24.1	15.1	12.6	15.1	20.7
$1,000 and under $1,200	15.5	16.2	14.7	18.2	10.8	14.8	9.2	11.7
$1,200 and under $1,400	10.7	16.2	9.3	4.5	7.9	16.8	5.3	3.7
$1,400 and under $1,600	7.3	14.9	3.4	10.0	5.2	14.8	1.9	5.1
$1,600 and under $1,800	4.3	10.9	2.1		3.0	9.6	1.1	
$1,800 and under $2,000	2.4	6.7	.8		1.4	5.0	.4	
$2,000 and under $2,200	1.2	3.9	.2		.7	2.5	.2	
$2,200 and under $2,400	.7	2.4	.1		.4	1.7	(1)	
$2,400 and over								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males:								
Under $200								
$200 and under $400	.1			.7	(1)			.4
$400 and under $600	.2			1.3	1.3	.2	1.3	4.5
$600 and under $800	1.6	1.0	1.9	2.0	6.1	1.7	8.2	10.9
$800 and under $1,000	11.3	4.6	14.9	16.1	14.7	5.6	19.9	20.4
$1,000 and under $1,200	20.4	7.9	26.7	32.2	20.6	10.8	25.3	31.0
$1,200 and under $1,400	23.7	19.0	26.4	26.2	20.4	18.1	22.4	18.5
$1,400 and under $1,600	17.2	20.0	17.7	6.7	15.5	21.1	13.7	6.0
$1,600 and under $1,800	11.7	18.2	6.4	14.8	10.4	18.7	4.9	8.3
$1,800 and under $2,000	6.9	13.4	3.9		5.9	12.1	2.7	
$2,000 and under $2,200	3.8	8.2	1.6		2.9	6.4	1.0	
$2,200 and under $2,400	2.0	4.8	.4		1.4	3.1	.5	
$2,400 and over	1.1	2.9	.1		.8	2.2	.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females:								
Under $200								
$200 and under $400					.4		.4	.6
$400 and under $600	4.0	1.9	4.4	4.2	12.9	4.1	13.7	15.2
$600 and under $800	27.9	29.6	25.8	43.7	44.3	32.9	45.7	44.5
$800 and under $1,000	46.9	38.9	48.5	43.7	32.1	40.6	30.8	34.8
$1,000 and under $1,200	19.2	25.9	19.5	7.0	9.4	19.6	8.6	4.3
$1,200 and under $1,400	2.0	3.7	1.8	1.4	.9	2.3	.8	.6
$1,400 and under $1,600					(1)	.5		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than a tenth of 1 percent.

TABLE 3.—*Percentage Distribution of Workers in Radio Manufacture, According to Annual Earnings, by Sex and Skill, 1936*—Continued

ALL PLANTS

Annual earnings	Percent of employees whose work extended over—							
	6 months or more				Any part of the year			
	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
Both sexes:								
Under $200	(1)	-------	(1)	-------	5.1	2.9	5.4	7.7
$200 and under $400	3.8	2.5	4.1	3.8	10.6	5.5	11.8	12.2
$400 and under $600	18.8	5.0	22.6	21.3	17.4	6.4	20.3	19.0
$600 and under $800	24.9	10.2	29.4	25.2	21.6	10.0	25.0	20.4
$800 and under $1,000	19.0	14.5	20.1	20.2	16.4	13.2	17.2	16.6
$1,000 and under $1,200	11.6	12.1	10.9	14.8	10.0	11.1	9.3	12.1
$1,200 and under $1,400	8.1	13.2	6.6	8.3	7.0	12.0	5.6	6.8
$1,400 and under $1,600	5.8	14.1	3.8	2.7	5.0	12.9	3.3	2.2
$1,600 and under $1,800	3.9	12.5	1.3	3.7	3.3	11.5	1.2	3.0
$1,800 and under $2,000	2.2	8.1	.8	-------	1.9	7.4	.6	-------
$2,000 and under $2,200	1.1	4.3	.3	-------	.9	3.9	.2	-------
$2,200 and under $2,400	.5	2.1	.1	-------	.5	1.9	.1	-------
$2,400 and over	.3	1.4	(1)	-------	.3	1.3	(1)	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males:								
Under $200	-------	-------	-------	-------	3.7	2.0	4.0	6.7
$200 and under $400	.5	.1	.5	1.7	5.8	3.7	6.5	8.2
$400 and under $600	9.0	2.8	11.5	14.9	10.2	4.9	12.2	15.1
$600 and under $800	12.6	5.2	16.4	16.4	11.5	5.6	14.5	13.7
$800 and under $1,000	15.1	9.6	17.8	18.4	13.4	8.8	15.7	15.6
$1,000 and under $1,200	17.2	11.2	19.4	23.6	15.1	10.2	17.0	19.8
$1,200 and under $1,400	16.4	16.4	16.9	14.1	14.4	14.9	14.9	11.8
$1,400 and under $1,600	12.3	18.1	10.4	4.6	10.9	16.4	9.1	3.8
$1,600 and under $1,800	8.2	16.1	3.7	6.3	7.3	14.8	3.2	5.3
$1,800 and under $2,000	4.6	10.4	2.1	-------	4.1	9.5	1.8	-------
$2,000 and under $2,200	2.3	5.5	.8	-------	2.0	5.0	.7	-------
$2,200 and under $2,400	1.1	2.7	.4	-------	1.0	2.5	.3	-------
$2,400 and over	.7	1.9	.1	-------	.6	1.7	.1	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females:								
Under $200	(1)	-------	(1)	-------	6.3	5.9	6.1	9.0
$200 and under $400	6.7	10.7	6.2	6.7	14.7	11.8	14.7	17.4
$400 and under $600	27.7	12.5	29.0	30.2	23.7	11.5	24.8	24.0
$600 and under $800	36.0	27.5	36.8	37.3	30.3	25.4	30.9	29.3
$800 and under $1,000	22.4	31.7	21.4	22.6	18.9	29.4	18.0	17.8
$1,000 and under $1,200	6.5	15.4	6.0	2.8	5.5	14.1	5.0	2.2
$1,200 and under $1,400	.7	1.8	.6	.4	.6	1.6	.5	.3
$1,400 and under $1,600	(1)	.4	-------	-------	(1)	.3	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than a tenth of 1 percent.

TABLE 3.—*Percentage Distribution of Workers in Radio Manufacture, According to Annual Earnings, by Sex and Skill, 1936*—Continued

PLANTS MAKING SETS

Annual earnings	Percent of employees whose work extended over—							
	12 months				9 months or more			
	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
Both sexes:								
Under $200								
$200 and under $400	0.1			0.9	(1)			0.4
$400 and under $600					3.8	0.2	5.5	3.6
$600 and under $800	4.0	0.4	4.8	9.6	19.9	4.4	27.1	18.1
$800 and under $1,000	14.6	4.7	20.5	13.9	20.1	8.7	24.5	24.2
$1,000 and under $1,200	18.4	8.7	22.0	26.9	15.6	12.5	15.2	25.9
$1,200 and under $1,400	22.3	20.7	23.0	23.4	14.3	16.8	13.2	14.1
$1,400 and under $1,600	16.3	20.7	16.1	7.0	11.4	20.7	8.3	5.2
$1,600 and under $1,800	12.8	21.6	6.3	18.3	8.2	19.6	3.0	8.5
$1,800 and under $2,000	6.8	12.7	5.0		4.2	10.5	2.1	
$2,000 and under $2,200	2.8	5.4	1.9		1.5	3.9	.7	
$2,200 and under $2,400	1.2	3.3	.2		.6	1.6	.3	
$2,400 and over	.7	1.8	.2		.4	1.1	.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males:								
Under $200								
$200 and under $400	0.1			1.1	.1			.6
$400 and under $600					.2	.2	0.3	
$600 and under $800	.9		1.2	2.2	3.5	.6	5.0	7.7
$800 and under $1,000	4.8	1.6	7.1	5.4	10.0	3.7	13.9	15.4
$1,000 and under $1,200	16.3	6.3	19.4	32.2	19.5	10.8	22.4	36.1
$1,200 and under $1,400	26.8	21.5	30.6	27.9	23.1	18.9	27.1	20.1
$1,400 and under $1,600	20.5	22.2	22.6	8.6	19.0	23.6	18.0	7.7
$1,600 and under $1,800	16.1	23.3	8.8	22.6	13.6	22.4	6.5	12.4
$1,800 and under $2,000	8.6	13.7	7.1		6.9	12.1	4.5	
$2,000 and under $2,200	3.5	5.9	2.6		2.5	4.5	1.5	
$2,200 and under $2,400	1.5	3.5	.3		1.0	1.9	.6	
$2,400 and over	.9	2.0	.3		.6	1.3	.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females:								
Under $200								
$200 and under $400								
$400 and under $600					9.2		9.9	11.4
$600 and under $800	16.1	(2)	13.8	(2)	44.3	30.4	46.3	40.5
$800 and under $1,000	52.2	(2)	53.6	(2)	35.4	43.0	33.7	43.0
$1,000 and under $1,200	26.7	(2)	28.3	(2)	9.8	24.1	8.9	3.8
$1,200 and under $1,400	5.0	(2)	4.3	(2)	1.3	2.5	1.2	1.3
Total	100.0	(2)	100.0	(2)	100.0	100.0	100.0	100.0

[1] Less than a tenth of 1 percent.
[2] Workers too few to justify presentation of a distribution

TABLE 3.—*Percentage Distribution of Workers in Radio Manufacture, According to Annual Earnings, by Sex and Skill, 1936*—Continued

PLANTS MAKING SETS

Annual earnings	Percent of employees whose work extended over—							
	6 months or more				Any part of the year			
	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
Both sexes:								
Under $200					2.7	0.8	3.3	3.5
$200 and under $400	1.7	0.6	2.1	2.3	7.5	3.3	8.7	9.0
$400 and under $600	17.6	2.2	22.9	18.4	17.1	4.2	21.2	17.2
$600 and under $800	22.3	7.5	27.4	22.5	20.2	7.4	24.5	19.9
$800 and under $1,000	17.0	12.6	18.1	19.2	15.3	11.9	16.1	17.0
$1,000 and under $1,200	11.9	12.6	10.6	18.1	10.7	11.9	9.4	16.0
$1,200 and under $1,400	10.5	15.1	9.0	9.9	9.5	14.2	8.0	8.8
$1,400 and under $1,600	8.3	17.9	5.7	3.7	7.4	16.7	5.1	3.3
$1,600 and under $1,800	5.9	16.8	2.1	5.9	5.3	15.8	1.8	5.3
$1,800 and under $2,000	3.0	9.0	1.4		2.7	8.5	1.3	
$2,000 and under $2,200	1.1	3.3	.5		1.0	3.1	.4	
$2,200 and under $2,400	.4	1.4	.2		.4	1.3	.2	
$2,400 and over	.3	1.0	(1)		.2	.9	(1)	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males:								
Under $200					1.7	0.7	2.2	2.6
$200 and under $400	0.2		0.1	1.4	3.6	2.8	3.6	6.1
$400 and under $600	6.3	1.6	9.5	7.6	7.6	3.9	10.1	8.2
$600 and under $800	9.7	4.5	12.7	13.7	9.3	4.6	12.0	12.6
$800 and under $1,000	12.4	9.1	13.9	16.1	11.5	8.5	12.9	14.7
$1,000 and under $1,200	17.0	11.4	18.1	28.9	15.8	10.7	16.9	26.4
$1,200 and under $1,400	19.1	17.0	21.3	16.1	17.7	15.9	19.7	14.7
$1,400 and under $1,600	15.4	20.4	14.1	6.2	14.3	19.1	13.1	5.6
$1,600 and under $1,800	11.0	19.2	5.0	10.0	10.2	18.0	4.7	9.1
$1,800 and under $2,000	5.6	10.3	3.5		5.2	9.7	3.2	
$2,000 and under $2,200	2.0	3.8	1.2		1.9	3.6	1.1	
$2,200 and under $2,400	.8	1.6	.5		.8	1.5	.4	
$2,400 and over	.5	1.1	.1		.4	1.0	.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females:								
Under $200					3.8	1.1	3.9	4.7
$200 and under $400	3.5	4.4	3.4	3.5	11.8	6.4	12.0	13.0
$400 and under $600	30.8	6.6	32.2	34.3	27.2	6.4	28.3	29.6
$600 and under $800	36.5	28.6	37.4	35.6	31.9	27.7	32.4	30.2
$800 and under $1,000	22.3	37.3	20.9	23.8	19.3	36.1	18.1	20.1
$1,000 and under $1,200	6.1	20.9	5.4	2.1	5.3	20.2	4.7	1.8
$1,200 and under $1,400	.8	2.2	.7	.7	.7	2.1	.6	.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than a tenth of 1 percent.

TABLE 3.—*Percentage Distribution of Workers in Radio Manufacture, According to Annual Earnings, by Sex and Skill, 1936*—Continued

PLANTS MAKING PARTS AND TUBES

Annual earnings	Percent of employees whose work extended over—							
	12 months				9 months or more			
	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
Both sexes:								
Under $200								
$200 and under $400					0.4		0.4	0.6
$400 and under $600	2.7	0.6	3.3	4.8	10.2	2.3	11.8	15.5
$600 and under $800	16.8	11.6	18.1	21.9	30.2	13.6	34.6	31.4
$800 and under $1,000	31.8	16.5	36.8	37.0	26.5	18.8	28.3	28.1
$1,000 and under $1,200	21.1	13.5	24.0	21.0	14.5	12.9	15.0	13.8
$1,200 and under $1,400	10.7	12.3	9.9	12.4	7.2	12.0	5.8	8.3
$1,400 and under $1,600	6.8	12.3	5.4	1.9	4.3	11.1	2.8	1.7
$1,600 and under $1,800	3.4	8.7	1.7	1.0	2.3	8.1	.9	.6
$1,800 and under $2,000	2.6	9.4	.4		1.7	8.3	.2	
$2,000 and under $2,200	2.1	7.7	.2		1.4	6.7	.1	
$2,200 and under $2,400	1.3	4.5	.2		.8	3.7	.1	
$2,400 and over	.7	2.9			.5	2.5		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males:								
Under $200								
$200 and under $400								
$400 and under $600	0.3			3.6	2.8	0.3	2.5	12.5
$600 and under $800	2.4	2.3	2.6	1.8	9.9	3.7	12.2	16.7
$800 and under $1,000	18.5	8.1	22.7	33.9	21.6	9.2	27.1	29.2
$1,000 and under $1,200	25.1	9.9	33.6	32.1	22.2	10.9	28.6	21.9
$1,200 and under $1,400	20.1	16.2	22.1	23.2	16.6	16.8	16.7	15.6
$1,400 and under $1,600	13.5	17.0	12.8	3.6	10.4	16.0	8.6	3.1
$1,600 and under $1,800	6.8	12.2	4.1	1.8	5.6	11.9	2.9	1.0
$1,800 and under $2,000	5.1	13.1	.9		4.3	12.2	.6	
$2,000 and under $2,200	4.2	10.8	.6		3.4	9.9	.4	
$2,200 and under $2,400	2.6	6.3	.6		2.0	5.4	.4	
$2,400 and over	1.4	4.1			1.2	3.7		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females:								
Under $200								
$200 and under $400					0.6		0.6	1.2
$400 and under $600	5.2	2.3	5.6	6.1	15.3	6.4	16.2	18.8
$600 and under $800	31.4	35.2	29.3	44.9	44.3	34.3	45.3	48.2
$800 and under $1,000	45.2	37.5	47.2	40.8	29.9	39.4	28.9	27.1
$1,000 and under $1,200	17.1	22.7	16.9	8.2	9.1	17.1	8.5	4.7
$1,200 and under $1,400	1.1	2.3	1.0		.7	2.1	.5	
$1,400 and under $1,600					.1	.7		
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3.—*Percentage Distribution of Workers in Radio Manufacture, According to Annual Earnings, by Sex and Skill, 1936*—Continued

PLANTS MAKING PARTS AND TUBES

Annual earnings	Percent of employees whose work extended over—							
	6 months or more				Any part of the year			
	All workers	Skilled	Semi-skilled	Un-skilled	All workers	Skilled	Semi-skilled	Un-skilled
Both sexes:								
Under $200	(1)	-------	(1)	-------	7.4	5.5	7.2	12.7
$200 and under $400	5.9	5.1	6.1	6.1	13.6	8.3	14.5	16.0
$400 and under $600	20.1	8.7	22.2	25.6	17.9	9.2	19.4	21.1
$600 and under $800	27.7	13.9	31.1	28.9	23.0	13.2	25.5	21.1
$800 and under $1,000	21.1	17.4	22.0	21.5	17.4	15.3	18.1	16.0
$1,000 and under $1,200	11.2	11.4	11.2	10.2	9.2	10.0	9.2	7.4
$1,200 and under $1,400	5.6	10.4	4.3	6.1	4.6	9.2	3.5	4.5
$1,400 and under $1,600	3.3	9.1	2.1	1.2	2.7	8.0	1.7	.9
$1,600 and under $1,800	1.7	6.6	.7	.4	1.4	6.0	.6	.3
$1,800 and under $2,000	1.3	6.8	.1	-------	1.1	6.0	.1	-------
$2,000 and under $2,200	1.1	5.5	.1	-------	.9	4.8	.1	-------
$2,200 and under $2,400	.6	3.0	.1	-------	.5	2.7	.1	-------
$2,400 and over	.4	2.1	-------	-------	.3	1.8	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Males:								
Under $200	-------	-------	-------	-------	6.1	4.1	5.8	11.9
$200 and under $400	0.9	0.3	1.0	2.2	8.5	5.1	9.6	10.8
$400 and under $600	12.7	5.0	13.8	26.3	13.4	6.7	14.2	23.8
$600 and under $800	16.7	6.5	20.7	20.4	14.2	7.2	17.1	15.1
$800 and under $1,000	19.1	10.7	22.2	22.0	15.8	9.3	18.5	16.8
$1,000 and under $1,200	17.4	10.7	20.9	15.3	14.4	9.3	17.3	11.4
$1,200 and under $1,400	12.9	15.3	12.1	10.9	10.7	13.3	10.0	8.1
$1,400 and under $1,600	7.9	13.8	6.2	2.2	6.5	12.0	5.1	1.6
$1,600 and under $1,800	4.2	10.4	2.1	.7	3.6	9.3	1.7	.5
$1,800 and under $2,000	3.2	10.7	.4	-------	2.7	9.3	.3	-------
$2,000 and under $2,200	2.6	8.6	.3	-------	2.1	7.5	.2	-------
$2,200 and under $2,400	1.5	4.7	.3	-------	1.2	4.1	.2	-------
$2,400 and over	.9	3.3	-------	-------	.8	2.8	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females:								
Under $200	0.1	-------	0.1	-------	8.3	8.1	7.8	13.8
$200 and under $400	9.3	13.8	8.6	11.0	17.0	14.3	16.9	22.4
$400 and under $600	25.1	15.3	26.4	24.8	20.9	13.8	22.0	17.8
$600 and under $800	35.4	27.0	36.3	39.4	29.2	24.3	29.8	28.3
$800 and under $1,000	22.6	29.1	21.8	21.1	18.5	26.2	17.9	15.1
$1,000 and under $1,200	6.9	12.7	6.4	3.7	5.7	11.4	5.3	2.6
$1,200 and under $1,400	.5	1.6	.4	-------	.4	1.4	.3	-------
$1,400 and under $1,600	.1	.5	-------	-------	(1)	.5	-------	-------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] Less than a tenth of 1 percent.

EARNINGS AND HOURS IN THE MANUFACTURE OF ELECTRICAL PRODUCTS

PART 2.—AVERAGE HOURLY EARNINGS, BY INDUSTRY DIVISIONS [1]

ARRANGED in ascending order, average hourly earnings in the various divisions of the electrical manufacturing industry ranged from 49.5 cents in the division manufacturing fuses, wiring devices, and specialty transformers to 86.2 cents in the division manufacturing transformers and switchgear.

Earnings were below the general industry average in the following divisions: Fuses, wiring devices, and specialty transformers; signaling apparatus; dry batteries; carbon products; electric lamps; wire and cable; electrical measuring instruments; domestic appliances; and fractional-horsepower motors. They were above the general average in the divisions manufacturing industrial controls, storage batteries, integral-horsepower motors and generators, transformers and switchgear, and miscellaneous products. The statement below shows the relative levels of the average hourly earnings in the various divisions, as compared with the average for the whole industry:

	Cents per hour
Fuses, wiring devices, and specialty transformers	49.5
Signaling apparatus	53.3
Dry batteries	53.6
Carbon products	58.1
Electric lamps	60.0
Wire and cable	62.9
Electrical measuring instruments	63.6
Domestic appliances	63.7
Fractional-horsepower motors	66.8
General average for industry	*71.0*
Industrial controls	74.3
Miscellaneous products	74.9
Storage batteries	78.3
Integral-horsepower motors and generators	85.7
Transformers and switchgear	86.2

The averages for the various divisions are determined largely by the types of work and the consequent proportions of skilled, semiskilled, and unskilled in the labor force. Thus, the relatively low average in the fuse, etc., division was due chiefly to the prevalence of light, simple, and repetitive work involving little skill; 71.8 percent of all its wage earners were classed as unskilled. The predominance of unskilled and semiskilled workers in the signaling-apparatus and dry-battery divisions explains the low averages there. In the manu-

[1] For Part 1 of this article, giving information on the industry as a whole, see Monthly Labor Review, June 1939.

facture of electric lamps—a process especially adapted to standardization and mass-production methods, three-fourths of the employees were women working at jobs classified as unskilled and semiskilled. Heavy work is involved in the manufacture of wire and cable and nearly nine-tenths of the employees in that branch of the industry are men; however, relatively little skill is required and 90.9 percent were either semiskilled or unskilled workers with resultant low rates of pay. The manufacture of electrical measuring instruments involves considerable precision work, but this requires only a small proportion (12.4 percent) of the labor force, the lower earnings of the other 87.6 percent—semiskilled and unskilled—reducing the branch average.

The larger proportion of skilled workers in the industrial-controls division, as compared with the situation in the divisions just mentioned, is responsible for the fact that the average for this division was 3.3 cents above the industry average. Slightly over one-fifth (21.3 percent) of its labor force were classified as skilled workers. The high wage level shown in the manufacture of storage batteries may be regarded as compensation for the exposure to acids and their fumes, to which the employees are subjected. The average hourly earnings in this branch of the industry were 7.3 cents higher than the industry average, and this in spite of the fact that only 13.6 percent of all the workers were classed as skilled. This division employs almost no women, only 2.1 percent of the personnel in August 1937 being of this sex. In the division whose product is integral-horsepower motors and generators, on the other hand, nearly one-third of the whole force was engaged in skilled operations, and the average hourly earnings were 14.7 cents above the average for the industry. The peak average earnings were those in the manufacture of transformers and switchgear (15.2 cents above the general average), where although the skilled workers formed only a little over one-fourth of the personnel, the division average was raised by the average earnings of the semiskilled workers who constituted 40.7 percent of the force. The hourly average of these semiskilled workers (86.4 cents) was 13.6 cents above the general industry average for this skill group and 6.4 cents above the next highest division average—80.0 cents, paid in the manufacture of integral-horsepower motors.

Average Hourly Earnings in Industry Divisions, by Sex and Skill

In each division, there was a very substantial spread in hourly earnings of workers. When the data are analyzed on the basis of sex-skill groups, however, it is found that average hourly earnings of skilled male workers in August 1937 were conspicuously higher than those of other groups. The difference between the averages of all skilled and semiskilled males was between 25 and 30 cents in three

branches, between 20 and 25 cents in six, between 15 and 20 cents in four, and between 10 and 15 cents in one (table 2).

The average for unskilled males was lower than that for semiskilled males in each industry division. The differences in average hourly earnings between the two groups varied from 2.7 cents in dry batteries to 18.0 cents in transformers and switchgear. However, the difference in averages in each case between semiskilled and unskilled males was considerably less than that between skilled and semiskilled males. The differences were over 15 cents in two branches, between 10 and 15 cents in eight, between 5 and 10 cents in two, and under 5 cents in two divisions.

In plants making fractional horsepower motors, semiskilled females averaged higher than unskilled males. In all other industry divisions for which comparisons are possible, the reverse was true, the differences ranging from 3.5 cents in fuses, wiring devices, and specialty transformers to 12.7 cents in dry batteries. These differences were over 10 cents in two, between 5 and 10 cents in four, and under 5 cents in four branches.

For females, the differences in average hourly earnings in favor of semiskilled as against unskilled workers were even smaller respectively than between the same male groups. In 10 industry branches, the differences between semiskilled and unskilled females ranged from less than 1 cent in dry batteries to 7.8 cents in fractional horsepower motors. The difference amounted to over 5 cents in 4 divisions.

In the several branches of the industry, as already noted, these differences in average hourly earnings of the various sex-skill groups, combined with the varying composition of the labor force as to sex and skill, accounted for a substantial part of the differences in the over-all averages. For example, the average in dry batteries was 10.1 cents less than that in domestic appliances, 53.6 as against 63.7 cents. However, only 4.1 percent of the workers engaged in dry batteries were skilled, as compared with 19.2 percent in domestic appliances. Furthermore, 73.1 percent of the employees manufacturing dry batteries were unskilled, as compared with 52.0 percent making domestic appliances. The hourly earnings of skilled workers in the latter group averaged 15.7 cents more than in the former, but for all other skill groups the difference between the two branches was less than that in the over-all averages. Indeed, among unskilled employees, there was very little difference in wages in the two divisions.

The influence of the sex-skill composition on the average hourly earnings of the industry branch is shown in striking form in the contrast between the general average for fuses, wiring devices, and specialty transformers and that for signaling apparatus. Earnings in fuses averaged 49.5 cents per hour and in signaling apparatus 53.3 cents. When the hourly earnings of these divisions are compared on the

basis of sex-skill groups, however, the picture is reversed, the average in each case being higher in fuses than in signaling apparatus, with the one exception of unskilled females. Thus, skilled males averaged 85.8 cents in fuses, as against 80.3 cents in signaling apparatus. Semiskilled males averaged 61.0 cents in the former and 56.2 cents in the latter, while the averages for unskilled males were respectively 49.4 and 45.1 cents. The differences in the general averages of the two branches largely reflect the fact that nearly two-thirds of the employees in fuses were females, whereas in signaling apparatus only one-fourth were women. There was a slightly lower percentage of skilled males in fuses than in signaling apparatus, but in both divisions the overwhelming bulk of workers were either unskilled or semiskilled. In the case of signaling apparatus, however, 37.7 percent of the employees were semiskilled, as compared with 20.2 percent in fuses, wiring devices, and specialty transformers. Moreover, only 50.3 percent of the total were unskilled in signaling apparatus, as against 71.8 percent in fuses. Perhaps the most important single difference in the sex-skill composition of the two divisions was the higher percentage of unskilled females in fuses than in signaling apparatus, the percentages being 57.4 in the one and only 23.9 in the other.

TABLE 1.—*Percentage Distribution of Workers in Electrical Manufacturing According to Average Hourly Earnings, by Skill, Sex, and Industry Division, August 1937*

FUSES, WIRING DEVICES, AND SPECIALTY TRANSFORMERS[1]

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
Under 25.0 cents	1.5	0.1	2.3	----	0.1	----	0.5	2.0	0.2	2.5
25.0 and under 27.5 cents	1.2	.1	1.8	----	.1	----	.5	1.6	.3	2.0
27.5 and under 30.0 cents	1.4	.3	2.1	0.3	.6	0.2	2.0	1.7	.5	2.1
30.0 and under 32.5 cents	4.1	1.6	5.7	----	.9	.3	2.5	5.5	3.8	5.9
32.5 and under 35.0 cents	3.6	.7	5.4	----	.6	----	2.5	4.9	1.9	5.6
35.0 and under 37.5 cents	11.5	3.5	16.1	----	4.1	1.7	11.5	14.8	7.5	16.6
37.5 and under 40.0 cents	9.5	2.9	13.5	----	2.5	1.5	5.5	12.5	6.1	14.2
40.0 and under 42.5 cents	10.9	6.6	13.5	.6	7.2	5.3	13.0	13.1	11.3	13.5
42.5 and under 47.5 cents	14.7	9.8	17.5	.3	11.0	9.9	14.5	17.3	14.9	17.9
47.5 and under 52.5 cents	10.7	11.4	10.3	.9	14.1	12.7	18.0	10.8	15.6	9.6
52.5 and under 57.5 cents	8.7	8.6	8.8	1.6	13.8	10.7	23.0	8.1	10.2	7.5
57.5 and under 62.5 cents	4.9	9.3	2.3	5.0	7.4	8.7	3.5	4.2	12.3	2.1
62.5 and under 67.5 cents	3.6	8.9	.4	3.1	10.3	13.3	1.0	1.8	7.5	.4
67.5 and under 72.5 cents	3.0	7.7	.2	8.2	8.6	11.1	1.0	.9	4.0	.1
72.5 and under 77.5 cents	2.2	5.9	----	10.1	5.5	7.3	----	.4	2.1	----
77.5 and under 82.5 cents	2.0	5.3	.1	12.6	4.3	5.4	1.0	.2	1.0	----
82.5 and under 87.5 cents	1.6	4.1	(2)	10.3	3.2	4.3	----	.1	.3	(2)
87.5 and under 92.5 cents	1.8	4.7	(2)	12.6	3.5	4.6	----	.1	.3	(2)
92.5 and under 97.5 cents	1.1	2.9	----	10.1	1.5	2.0	----	----	----	----
97.5 and under 102.5 cents	.6	1.6	----	5.7	.6	.8	----	(2)	.2	----
102.5 and under 112.5 cents	.8	2.2	----	10.1	.1	.2	----	----	----	----
112.5 and under 122.5 cents	.5	1.4	----	6.6	----	----	----	----	----	----
122.5 and under 132.5 cents	.1	.3	----	1.6	----	----	----	----	----	----
142.5 and under 152.5 cents	(2)	(2)	----	.3	----	----	----	----	----	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] A small number of skilled workers are included in the "semiskilled, female" classification in this division.
[2] Less than a tenth of 1 percent.

TABLE 1.—*Percentage Distribution of Workers in Electrical Manufacturing According to Average Hourly Earnings, by Skill, Sex, and Industry Division, August 1937*—Con.

SIGNALING APPARATUS [3]

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
25.0 and under 27.5 cents	0.1	0.1	0.3					0.3	0.2	0.3
27.5 and under 30.0 cents	.2		.8					.4		.8
30.0 and under 32.5 cents	.7	.3	1.8					1.3	.7	1.9
32.5 and under 35.0 cents	.9	.3	2.6		0.3	0.4		1.6	.5	2.7
35.0 and under 37.5 cents	5.2	.7	18.6		.5	.5		10.0	1.2	19.6
37.5 and under 40.0 cents	6.8	1.6	22.1		2.2	1.1		11.7	3.0	21.5
40.0 and under 42.5 cents	16.1	15.0	19.1		6.9	7.0		26.7	33.0	19.9
42.5 and under 47.5 cents	21.7	20.5	24.9	0.5	14.9	14.5		31.9	38.2	25.1
47.5 and under 52.5 cents	11.3	13.1	6.2	.5	17.8	17.9		9.1	12.1	5.7
52.5 and under 57.5 cents	8.5	10.8	1.8	3.2	17.1	17.4		3.4	5.2	1.4
57.5 and under 62.5 cents	8.0	10.4	1.0	6.5	16.3	16.9		2.2	3.2	1.1
62.5 and under 67.5 cents	4.8	6.4		9.2	9.0	9.3		.6	1.2	
67.5 and under 72.5 cents	3.7	5.0		10.8	6.1	6.3		.3	.5	
72.5 and under 77.5 cents	3.8	5.0	.5	19.6	3.3	3.1		.5	1.0	
77.5 and under 82.5 cents	2.7	3.5	.3	14.2	2.6	2.5				
82.5 and under 87.5 cents	1.5	2.0		8.6	1.2	1.3				
87.5 and under 92.5 cents	.8	1.1		4.9	.7	.7				
92.5 and under 97.5 cents	.6	.8		4.3	.2	.2				
97.5 and under 102.5 cents	.7	.9		3.8	.5	.5				
102.5 and under 112.5 cents	1.1	1.5		8.6	.2	.2				
112.5 and under 122.5 cents	.6	.8		4.3	.2	.2				
122.5 and under 132.5 cents	.1	.1		.5						
162.5 cents and over	.1	.1		.5						
Total	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0

DRY BATTERIES [4]

25.0 and under 27.5 cents	0.2		0.4					0.2		0.4
27.5 and unde 30.0 cents										
30.0 and under 32.5 cents	.8	0.2	1.6		0.4			1.0	0.2	1.7
32.5 and under 35.0 cents	1.3	.2	2.7		.7			1.6	.2	2.7
35.0 and under 37.5 cents	4.8		10.4		1.1			6.2		11.6
37.5 and under 40.0 cents	2.3	.2	4.8		2.9			2.2	.2	4.0
40.0 and under 42.5 cents	9.9	.5	20.9		6.5	1.0		11.5	.2	21.3
42.5 and under 47.5 cents	11.2	2.0	22.0		10.5	2.6		12.0	1.9	20.9
47.5 and under 52.5 cents	24.8	20.7	29.6		14.4	10.4		29.6	28.2	30.9
52.5 and under 57.5 cents	15.0	23.5	5.2		24.9	30.8		12.8	22.9	4.0
57.5 and under 62.5 cents	9.8	16.5	1.8		13.7	19.3		8.7	16.4	1.9
62.5 and under 67.5 cents	7.5	13.5	.4		7.9	11.5		7.4	15.4	.4
67.5 and under 72.5 cents	4.8	8.7	.2		8.7	12.5		3.0	6.2	.2
72.5 and under 77.5 cents	3.9	7.3			5.1	7.3		2.7	5.8	
77.5 and under 82.5 cents	1.6	2.9			.7	1.0		1.0	2.2	
82.5 and under 87.5 cents	1.0	1.8			1.8	2.6				
87.5 and under 92.5 cents	.6	1.1			.7	1.0		.1	.2	
92.5 and under 97.5 cents	.3	.6								
97.5 and under 102.5 cents	.2	.3								
Total	100.0	100.0	100.0		100.0	100.0		100.0	100.0	100.0

CARBON PRODUCTS [4]

27.5 and under 30.0 cents	0.6		2.9					1.0		3.0
30.0 and under 32.5 cents	.7	0.1	2.9					1.2	0.3	3.0
32.5 and under 35.0 cents	1.6	.8	4.7					2.7	1.7	4.8
35.0 and under 37.5 cents	5.3	1.5	21.1		1.1			8.4	3.1	20.1
37.5 and under 40.0 cents	1.0	1.1	.6					1.7	2.2	.6
40.0 and under 42.5 cents	7.2	3.8	21.6		1.4	1.1		11.5	6.7	21.9
42.5 and under 47.5 cents	8.1	8.0	8.8		3.6	3.7		11.9	13.2	9.1
47.5 and under 52.5 cents	15.3	17.3	7.6		11.5	11.7		19.8	25.2	7.9
52.5 and under 57.5 cents	19.8	21.0	14.6		22.5	23.1		21.3	24.2	15.2
57.5 and under 62.5 cents	12.3	14.4	3.5		23.6	24.1		6.5	7.9	3.6
62.5 and under 67.5 cents	6.7	7.1	4.7		8.6	8.4		5.0	5.3	4.2
67.5 and under 72.5 cents	5.1	5.6	2.9		6.8	6.6		2.9	3.1	2.4
72.5 and under 77.5 cents	5.4	5.9	3.5		6.5	6.6		3.8	3.9	3.6
77.5 and under 82.5 cents	2.3	2.7	.6		2.5	2.6		1.3	1.7	.6
82.5 and under 87.5 cents	2.9	3.6			1.8	1.8		.4	.6	
87.5 and under 92.5 cents	1.8	2.2			2.9	2.9		.4	.6	
92.5 and under 97.5 cents	1.0	1.3			1.8	1.8				
97.5 and under 102.5 cents	1.5	1.8			2.5	2.6		.2	.3	
102.5 and under 112.5 cents	1.0	1.3			2.5	2.6				
112.5 and under 122.5 cents	.3	.4			.4	.4				
122.5 and under 132.5 cents	.1	.1								
Total	100.0	100.0	100.0		100.0	100.0		100.0	100.0	100.0

[3] There were not enough semiskilled female workers in this division to justify the presentation of a separate distribution.

[4] There were not enough skilled male or semiskilled female workers in this division to justify the presentation of a separate distribution.

TABLE 1.—*Percentage Distribution of Workers in Electrical Manufacturing According to Average Hourly Earnings, by Skill, Sex, and Industry Division, August 1937*—Con.

ELECTRIC LAMPS [1]

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
25.0 and under 27.5 cents	0.4	0.1	0.5	.....	0.3	.....	0.4	0.7	0.4	0.8
27.5 and under 30.0 cents	.5	.....	.6	.....	.3	.....	.3	.9	.....	1.1
30.0 and under 32.5 cents	1.3	.1	1.6	.....	1.2	.....	1.4	1.6	.4	1.9
32.5 and under 35.0 cents	.8	.4	.9	.....	1.2	1.3	1.2	.4	.....	.5
35.0 and under 37.5 cents	2.0	.7	2.5	.....	2.2	.4	2.5	2.3	1.8	2.4
37.5 and under 40.0 cents	.5	.8	.4	.....	.5	.9	.4	.6	1.8	.3
40.0 and under 42.5 cents	3.2	2.1	3.5	.....	4.3	5.3	4.1	2.5	1.8	2.6
42.5 and under 47.5 cents	8.5	2.0	10.7	0.7	9.0	2.2	10.2	9.9	3.6	11.5
47.5 and under 52.5 cents	19.8	6.0	24.6	1.7	21.3	7.9	23.5	22.6	9.9	26.1
52.5 and under 57.5 cents	18.9	4.2	24.0	1.0	20.3	5.7	22.8	21.6	6.7	25.5
57.5 and under 62.5 cents	13.1	6.3	15.4	3.7	13.1	4.8	14.5	15.7	11.2	16.8
62.5 and under 67.5 cents	9.2	9.8	9.0	6.1	10.4	10.7	10.4	8.3	13.9	6.9
67.5 and under 72.5 cents	4.5	5.2	4.3	.3	6.0	7.9	5.7	3.6	9.0	2.2
72.5 and under 77.5 cents	3.9	10.2	1.7	4.4	3.3	9.7	2.2	4.6	18.5	1.0
77.5 and under 82.5 cents	3.4	12.6	.3	8.1	2.8	17.3	.3	3.0	13.5	.3
82.5 and under 87.5 cents	1.8	7.1	[2]	8.8	1.3	8.4	.1	.7	3.6	.....
87.5 and under 92.5 cents	1.4	5.5	[2]	8.1	.8	5.7	.....	.5	1.8	.1
92.5 and under 97.5 cents	1.8	7.0	.....	13.5	.6	4.4	.....	.2	.9	.....
97.5 and under 102.5 cents	1.4	5.6	.....	10.1	.7	4.8	.....	.1	.4	.....
102.5 and under 112.5 cents	1.9	7.6	.....	16.9	.4	2.6	.....	.1	.4	.....
112.5 and under 122.5 cents	1.1	4.3	.....	10.5	.....	.....	.....	.1	.4	.....
122.5 and under 132.5 cents	.4	1.7	.....	4.4	.....	.....	.....	.....	.....	.....
132.5 and under 142.5 cents	[2]	.1	.....	.3	.....	.....	.....	.....	.....	.....
152.5 and under 162.5 cents	.1	.3	.....	.7	.....	.....	.....	.....	.....	.....
162.5 cents and over	.1	.3	.....	.7	.....	.....	.....	.....	.....	.....
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

WIRE AND CABLE [1]

Under 25.0 cents	[2]	[2]	0.3	.....	.....	.....	.....	0.1	[2]	0.3
25.0 and under 27.5 cents	0.4	0.1	2.8	.....	0.1	[2]	0.9	.8	0.2	3.2
27.5 and under 30.0 cents	[2]	[2]	.3	.....	.....	.....	.....	.1	[2]	.3
30.0 and under 32.5 cents	1.0	.5	4.8	.....	.2	0.2	.....	1.7	.8	5.6
32.5 and under 35.0 cents	.4	.2	1.7	.....	.2	.2	.9	.6	.3	1.8
35.0 and under 37.5 cents	2.3	.8	14.5	.....	1.1	.8	9.6	3.6	1.0	15.4
37.5 and under 40.0 cents	1.2	.4	7.8	.....	.6	.3	5.2	2.0	.6	8.2
40.0 and under 42.5 cents	2.9	2.1	9.3	0.2	1.5	1.2	8.7	4.4	3.3	9.4
42.5 and under 47.5 cents	9.5	8.1	20.4	.2	5.3	4.5	21.6	14.3	12.9	20.3
47.5 and under 52.5 cents	11.6	11.5	12.0	.8	6.8	6.6	12.2	16.9	18.3	12.0
52.5 and under 57.5 cents	12.5	12.2	14.8	2.6	9.7	9.4	18.3	16.2	16.7	14.2
57.5 and under 62.5 cents	9.6	10.2	4.9	2.1	9.9	10.0	8.7	10.8	12.2	4.3
62.5 and under 67.5 cents	13.7	15.0	3.4	6.7	14.9	15.3	8.7	13.8	16.3	2.4
67.5 and under 72.5 cents	9.0	9.8	2.1	6.1	13.5	13.9	3.5	6.1	7.0	1.8
72.5 and under 77.5 cents	7.9	8.9	.5	11.6	11.1	11.6	.....	4.9	5.9	.6
77.5 and under 82.5 cents	4.6	5.1	.3	11.3	6.9	7.1	1.7	1.7	2.1	.....
82.5 and under 87.5 cents	4.0	4.5	.1	12.4	6.1	6.3	.....	.9	1.1	.2
87.5 and under 92.5 cents	3.0	3.3	.....	12.4	4.0	4.2	.....	.5	.6	.....
92.5 and under 97.5 cents	2.4	2.8	.....	10.2	3.6	3.7	.....	.3	.3	.....
97.5 and under 102.5 cents	1.6	1.8	.....	8.5	2.0	2.1	.....	.1	.2	.....
102.5 and under 112.5 cents	1.6	1.8	.....	8.5	1.9	2.0	.....	.2	.2	.....
112.5 and under 122.5 cents	.6	.6	.....	4.2	.4	.4	.....	[2]	[2]	.....
122.5 and under 132.5 cents	.2	.3	.....	1.6	.2	.2	.....	.....	.....	.....
132.5 and under 142.5 cents	[2]	[2]	.....	.3	.....	.....	.....	.....	.....	.....
142.5 and under 152.5 cents	[2]	[2]	.....	.3	.....	.....	.....	.....	.....	.....
152.5 and under 162.5 cents	[2]	[2]	.....	.....	[2]	[2]	.....	.....	.....	.....
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] A small number of skilled workers are included in the "semiskilled, female" classification in this divsion.
[2] Less than a tenth of 1 percent.

TABLE 1.—*Percentage Distribution of Workers in Electrical Manufacturing According to Average Hourly Earnings, by Skill, Sex, and Industry Division, August 1937*—Con.

ELECTRICAL MEASURING INSTRUMENTS [1]

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
25.0 and under 27.5 cents	0.1	0.1			0.2	0.2				
27.5 and under 30.0 cents										
30.0 and under 32.5 cents	.1	.1	0.2					0.3	0.3	0.3
32.5 and under 35.0 cents	1.8		4.4		.1		0.4	4.0		6.0
35.0 and under 37.5 cents	2.1	.6	4.3		.5	.2	1.4	4.3	1.9	5.4
37.5 and under 40.0 cents	2.5	.5	5.5		1.1	.3	3.5	4.5	1.1	6.2
40.0 and under 42.5 cents	3.2	1.6	5.7		2.3	.9	6.3	5.1	4.6	5.4
42.5 and under 47.5 cents	8.2	4.0	14.6		5.9	3.3	14.0	12.9	9.1	14.8
47.5 and under 52.5 cents	15.2	9.5	23.6	0.6	14.9	9.4	31.9	19.4	17.1	20.5
52.5 and under 57.5 cents	12.8	7.3	21.1		11.3	7.8	22.1	18.0	12.6	20.7
57.5 and under 62.5 cents	11.6	9.2	15.3	1.2	10.8	9.9	13.7	15.4	14.4	15.9
62.5 and under 67.5 cents	6.4	7.9	4.1	3.4	7.1	7.9	4.6	6.6	11.8	4.0
67.5 and under 72.5 cents	5.6	8.7	1.0	5.0	8.3	10.6	1.4	3.1	7.8	.8
72.5 and under 77.5 cents	5.9	9.6	.2	7.8	7.8	10.1	.7	3.5	10.5	
77.5 and under 82.5 cents	7.6	12.6		12.5	11.7	15.6		2.0	6.2	
82.5 and under 87.5 cents	5.5	9.3		16.1	7.6	10.1		.4	1.3	
87.5 and under 92.5 cents	3.9	6.6		13.1	5.0	6.6		.3	.8	
92.5 and under 97.5 cents	2.1	3.5		7.8	2.4	3.1		.2	.5	
97.5 and under 102.5 cents	2.4	3.9		13.1	1.7	2.2				
102.5 and under 112.5 cents	2.0	3.3		12.5	1.0	1.3				
112.5 and under 122.5 cents	.7	1.2		4.4	.3	.5				
122.5 and under 132.5 cents	.2	.3		1.6						
132.5 and under 142.5 cents	.1	.2		.9						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

DOMESTIC APPLIANCES [1]

Under 25.0 cents	0.5	0.1	1.5					1.0	0.3	1.8
25.0 and under 27.5 cents	2.1	1.6	3.2		0.1	0.1		3.9	4.0	3.9
27.5 and under 30.0 cents	1.9	.7	4.6		.2	.2		3.5	1.7	5.5
30.0 and under 32.5 cents	4.7	3.1	8.7		2.4	1.4	7.4	7.8	6.7	9.0
32.5 and under 35.0 cents	1.0	.4	2.6		1.0	.1	5.5	1.4	.8	2.1
35.0 and under 37.5 cents	2.8	1.8	5.1		2.6	1.4	8.6	3.9	3.4	4.4
37.5 and under 40.0 cents	2.1	1.1	4.5	0.2	1.6	1.2	3.7	3.2	1.8	4.7
40.0 and under 42.5 cents	4.7	2.8	9.2	.6	3.4	1.5	12.9	6.9	5.5	8.5
42.5 and under 47.5 cents	8.7	5.7	16.0	3.3	6.5	4.8	15.2	12.0	8.3	16.0
47.5 and under 52.5 cents	7.0	6.6	7.9	1.8	7.3	7.5	6.1	8.8	9.2	8.3
52.5 and under 57.5 cents	6.7	4.3	12.4	1.8	7.4	6.4	12.3	8.1	4.2	12.3
57.5 and under 62.5 cents	10.1	11.5	7.0	2.0	11.2	11.2	11.7	12.3	18.2	6.1
62.5 and under 67.5 cents	10.6	10.8	10.4	4.7	13.5	14.8	8.0	11.2	11.6	10.8
67.5 and under 72.5 cents	7.3	8.1	5.3	4.5	11.0	11.7	7.4	6.3	7.6	4.9
72.5 and under 77.5 cents	4.7	6.2	1.1	6.6	6.9	8.1	.6	2.8	4.2	1.2
77.5 and under 82.5 cents	5.0	6.8	.5	6.9	8.1	9.5	.6	2.5	4.4	.5
82.5 and under 87.5 cents	3.4	4.8		5.0	5.5	6.6		1.6	3.0	
87.5 and under 92.5 cents	3.4	4.8		7.1	4.5	5.4		1.4	2.6	
92.5 and under 97.5 cents	2.4	3.4		7.8	2.1	2.5		.6	1.2	
97.5 and under 102.5 cents	2.1	3.0		7.2	2.0	2.4		.3	.5	
102.5 and under 112.5 cents	5.0	7.1		22.6	1.6	1.9		.4	.7	
112.5 and under 122.5 cents	1.3	1.8		5.7	.6	.7		.1	.1	
122.5 and under 132.5 cents	1.7	2.4		8.4	.3	.4				
132.5 and under 142.5 cents	.5	.8		2.6	.2	.2				
142.5 and under 152.5 cents	.2	.2		.9						
152.5 and under 162.5 cents	.1	.1		.3						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] A small number of skilled workers are included in the "semiskilled, female" classification in this division.

TABLE 1.—*Percentage Distribution of Workers in Electrical Manufacturing According to Average Hourly Earnings, by Skill, Sex, and Industry Division, August 1937*—Con.

FRACTIONAL-HORSEPOWER MOTORS [1]

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
30.0 and under 32.5 cents	0.8	0.2	2.5	----	0.1	----	----	1.6	0.6	2.6
32.5 and under 35.0 cents	.6	.6	.6	----	.1	0.1	----	1.1	1.5	.6
35.0 and under 37.5 cents	2.5	2.3	2.9	----	.2	.1	----	4.7	6.3	3.0
37.5 and under 40.0 cents	1.4	1.3	1.9	----	.6	.5	----	2.4	2.9	1.9
40.0 and under 42.5 cents	3.5	3.6	3.1	----	1.9	1.6	----	5.5	8.1	2.8
42.5 and under 47.5 cents	8.3	6.6	12.9	0.4	5.1	5.0	----	12.6	11.9	13.3
47.5 and under 52.5 cents	9.8	6.2	19.5	.4	6.9	6.9	----	14.4	8.7	20.3
52.5 and under 57.5 cents	12.1	6.9	25.9	1.1	7.9	7.7	----	17.9	9.4	27.0
57.5 and under 62.5 cents	10.4	6.5	20.9	2.0	7.5	7.2	----	14.7	8.1	21.5
62.5 and under 67.5 cents	7.1	8.1	4.6	2.7	8.2	8.2	----	7.7	10.8	4.4
67.5 and under 72.5 cents	8.5	10.1	4.4	5.0	13.9	13.0	----	6.0	9.4	2.4
72.5 and under 77.5 cents	5.5	7.3	.7	5.7	8.1	8.1	----	3.8	7.3	.2
77.5 and under 82.5 cents	5.7	7.8	----	6.7	9.9	10.4	----	2.8	5.4	----
82.5 and under 87.5 cents	6.6	8.9	.1	7.8	12.1	12.7	----	2.6	5.1	----
87.5 and under 92.5 cents	5.9	8.1	----	13.9	9.9	10.4	----	1.0	2.0	----
92.5 and under 97.5 cents	3.7	5.0	----	12.2	4.7	5.0	----	.5	1.1	----
97.5 and under 102.5 cents	2.6	3.6	----	11.0	2.3	2.5	----	.3	.7	----
102.5 and under 112.5 cents	3.0	4.1	----	17.6	.5	.5	----	.3	.6	----
112.5 and under 122.5 cents	1.6	2.2	----	10.4	.1	.1	----	.1	.1	----
122.5 and under 132.5 cents	.3	.5	----	2.2	----	----	----	----	----	----
132.5 and under 142.5 cents	.1	.1	----	.7	----	----	----	----	----	----
142.5 and under 152.5 cents	[2]	[2]	----	.2	----	----	----	----	----	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	----	100.0	100.0	100.0

INDUSTRIAL CONTROLS [1]

Under 25.0 cents	[2]	[2]	----	----	[2]	[2]	----	----	----	----
25.0 and under 27.5 cents	[2]	[2]	0.2	----	----	----	----	0.1	0.1	0.2
27.5 and under 30.0 cents	[2]	----	.1	----	----	----	----	[2]	----	.1
30.0 and under 32.5 cents	0.3	0.4	.2	----	0.3	0.3	----	.5	.7	.2
32.5 and under 35.0 cents	.4	.4	.6	----	[2]	[2]	----	1.1	1.2	.8
35.0 and under 37.5 cents	.9	.5	3.1	----	.3	.1	1.3	2.2	1.5	3.7
37.5 and under 40.0 cents	.4	.3	.7	----	.1	.2	----	.8	.7	.9
40.0 and under 42.5 cents	2.0	1.3	5.5	0.1	1.0	1.0	.7	4.3	2.8	7.2
42.5 and under 47.5 cents	4.7	3.6	9.9	.4	3.2	2.9	5.7	8.6	7.2	11.4
47.5 and under 52.5 cents	7.4	5.1	18.5	.3	6.5	4.5	22.3	12.3	9.9	17.2
52.5 and under 57.5 cents	9.1	5.9	24.5	.6	7.2	4.6	28.4	15.9	12.2	23.2
57.5 and under 62.5 cents	9.4	7.4	19.0	1.5	9.1	7.1	24.7	14.2	12.7	17.1
62.5 and under 67.5 cents	11.7	12.2	8.5	1.6	11.5	12.0	7.7	17.3	21.4	8.8
67.5 and under 72.5 cents	9.7	10.5	6.1	4.1	13.1	14.1	5.3	9.2	10.6	6.4
72.5 and under 77.5 cents	7.8	9.0	2.0	4.1	11.7	12.9	1.3	5.8	7.6	2.2
77.5 and under 82.5 cents	5.4	6.4	.4	5.7	7.5	8.4	.3	2.9	4.2	.5
82.5 and under 87.5 cents	5.0	5.9	.4	7.2	6.9	7.6	1.3	1.7	2.5	.1
87.5 and under 92.5 cents	4.6	5.5	----	10.3	5.1	5.8	----	.9	1.3	----
92.5 and under 97.5 cents	4.1	4.9	.1	8.7	4.4	4.9	.3	1.2	1.7	----
97.5 and under 102.5 cents	4.2	5.0	.2	11.1	4.2	4.7	.7	.3	.5	----
102.5 and under 112.5 cents	5.6	6.7	----	16.0	4.6	5.2	----	.7	1.0	----
112.5 and under 122.5 cents	4.1	5.0	----	14.5	2.5	2.8	----	[2]	.1	----
122.5 and under 132.5 cents	1.6	2.0	----	6.5	.6	.7	----	[2]	.1	----
132.5 and under 142.5 cents	.7	.9	----	3.3	.1	.1	----	----	----	----
142.5 and under 152.5 cents	.6	.7	----	2.6	.1	.1	----	----	----	----
152.5 and under 162.5 cents	.2	.2	----	.8	[2]	[2]	----	----	----	----
162.5 cents and over	.1	.2	----	.6	----	----	----	----	----	----
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] A small number of skilled workers are included in the "semiskilled, female" classification in this division.
[2] Less than a tenth of 1 percent.
[3] There were not enough semiskilled female workers in this division to justify the presentation of a separate distribution.

TABLE 1.—*Percentage Distribution of Workers in Electrical Manufacturing According to Average Hourly Earnings, by Skill, Sex, and Industry Division, August 1937*—Con.

STORAGE BATTERIES[3]

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
25.0 and under 27.5 cents	0.1	0.1			0.1	0.1		0.1	0.1	
27.5 and under 30.0 cents										
30.0 and under 32.5 cents	(2)	(2)						.1	.1	
32.5 and under 35.0 cents	.1	.1			.2	.2		.1	.1	
35.0 and under 37.5 cents	(2)	(2)						.1	.1	
37.5 and under 40.0 cents	.1	.1			.1	.1				
40.0 and under 42.5 cents	.9	1.0			1.0	1.0		1.2	1.2	
42.5 and under 47.5 cents	2.2	1.5			1.4	1.4		4.5	2.4	
47.5 and under 52.5 cents	1.4	1.3			1.7	1.5		1.6	1.6	
52.5 and under 57.5 cents	5.3	4.7		0.2	2.4	1.8		11.8	11.3	
57.5 and under 62.5 cents	10.4	10.4		1.2	6.6	6.7		20.1	20.2	
62.5 and under 67.5 cents	9.4	9.4		2.9	8.4	8.4		13.5	13.8	
67.5 and under 72.5 cents	9.9	10.1		5.4	11.3	11.5		9.3	9.7	
72.5 and under 77.5 cents	9.1	9.3		5.9	10.3	10.5		8.4	8.8	
77.5 and under 82.5 cents	8.7	8.7		8.8	8.3	8.1		9.2	9.7	
82.5 and under 87.5 cents	12.9	13.3		14.2	16.3	16.6		7.2	7.6	
87.5 and under 92.5 cents	8.4	8.5		13.4	9.5	9.6		4.5	4.7	
92.5 and under 97.5 cents	7.0	7.2		12.0	8.2	8.3		3.2	3.3	
97.5 and under 102.5 cents	6.2	6.3		11.5	6.6	6.6		3.5	3.6	
102.5 and under 112.5 cents	5.3	5.4		16.7	4.9	4.9		1.4	1.5	
112.5 and under 122.5 cents	1.6	1.6		4.4	1.8	1.8		.2	.2	
122.5 and under 132.5 cents	.6	.6		2.7	.4	.4				
132.5 and under 142.5 cents	.3	.3		.5	.4	.4				
142.5 and under 152.5 cents	.1	.1		.2	.1	.1				
Total	100.0	100.0		100.0	100.0	100.0		100.0	100.0	

INTEGRAL-HORSEPOWER MOTORS AND GENERATORS[1]

Under 25.0 cents	0.1	0.1	0.2		0.1	0.1		0.2	0.2	0.2
25.0 and under 27.5 cents	(2)	(2)	.2		(2)		0.8	.1	.2	
27.5 and under 30.0 cents	.1	.1	.2		(2)		.8	.2	.3	
30.0 and under 32.5 cents	.3	.3	.5		.3	.3		.9	.9	.6
32.5 and under 35.0 cents	.1	.1	.3		.1	.1		.3	.2	.4
35.0 and under 37.5 cents	.7	.3	5.1		.4	.3	3.0	2.1	.7	5.7
37.5 and under 40.0 cents	.5	.4	2.0		.4	.3	3.0	1.4	1.3	1.7
40.0 and under 42.5 cents	1.5	1.1	5.4		1.3	1.2	3.0	3.8	2.9	6.1
42.5 and under 47.5 cents	3.3	2.5	11.3		3.4	3.1	8.3	7.2	5.3	12.2
47.5 and under 52.5 cents	3.8	3.1	10.4	(2)	3.6	3.3	10.5	8.7	8.1	10.3
52.5 and under 57.5 cents	5.8	5.0	13.4	0.6	6.3	5.8	15.7	11.5	11.1	12.8
57.5 and under 62.5 cents	6.5	5.9	12.8	.9	7.7	7.6	9.0	11.7	10.8	14.0
62.5 and under 67.5 cents	6.3	5.6	13.0	1.6	7.8	7.3	17.9	9.7	9.0	11.6
67.5 and under 72.5 cents	5.6	4.9	12.7	1.9	6.9	6.8	9.8	8.3	6.3	13.5
72.5 and under 77.5 cents	7.5	7.7	6.1	3.3	8.1	8.2	5.3	11.9	14.1	6.3
77.5 and under 82.5 cents	6.8	7.2	2.8	4.6	8.2	8.2	8.3	7.4	9.7	1.3
82.5 and under 87.5 cents	6.0	6.5	1.6	4.5	8.1	8.4	3.0	4.6	5.9	1.3
87.5 and under 92.5 cents	5.7	6.2	.7	5.4	7.5	7.8	.8	3.2	4.1	.6
92.5 and under 97.5 cents	5.2	5.7	.5	5.9	6.5	6.8		2.2	2.8	.6
97.5 and under 102.5 cents	6.2	6.7	.3	8.8	6.8	7.2		1.8	2.3	.4
102.5 and under 112.5 cents	9.4	10.3		16.5	8.4	8.7		2.0	2.8	
112.5 and under 122.5 cents	7.8	8.5	.3	17.6	4.5	4.8		.6	.7	.4
122.5 and under 132.5 cents	5.2	5.7		13.0	2.4	2.5		.1	.2	
132.5 and under 142.5 cents	2.8	3.0		7.2	1.0	1.0				
142.5 and under 152.5 cents	1.6	1.8	.2	4.7	.1	.1	.8	.1	.1	
152.5 and under 162.5 cents	.7	.8		2.1	.1	.1				
162.5 cents and over	.5	.5		1.4						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] A small number of skilled workers were included in the "semiskilled, female" classification in this division.
[2] Less than a tenth of 1 percent.
[3] There were not enough female workers in this division to justify the presentation of a separate distribution.

TABLE 1.—*Percentage Distribution of Workers in Electrical Manufacturing According to Average Hourly Earnings, by Skill, Sex, and Industry Division, August 1937*—Con.

TRANSFORMERS AND SWITCH GEAR [3]

Average hourly earnings	All workers			Skilled: Male	Semiskilled			Unskilled		
	Total	Male	Female		Total	Male	Female	Total	Male	Female
25.0 and under 27.5 cents	(2)	(2)						0.1	0.1	
27.5 and under 30.0 cents	(2)	(2)	0.2					.1	(2)	0.2
30.0 and under 32.5 cents	(2)	(2)			0.1	0.1		(2)	(2)	
32.5 and under 35.0 cents	0.1	(2)	.5					.2	(2)	.6
35.0 and under 37.5 cents	.2	0.2	.5		(2)	(2)		.5	.5	.6
37.5 and under 40.0 cents	.7	.7	.8		1.3	1.3		.5	.3	1.0
40.0 and under 42.5 cents	1.2	1.0	2.9		.5	.6		2.8	2.7	3.4
42.5 and under 47.5 cents	3.3	2.8	8.8	0.1	2.5	2.5		6.6	5.8	9.7
47.5 and under 52.5 cents	4.3	3.4	14.1	.3	2.3	2.0		9.8	8.5	14.6
52.5 and under 57.5 cents	4.8	3.6	18.7	.4	2.9	2.5		10.5	8.3	18.9
57.5 and under 62.5 cents	5.4	4.1	20.4	.4	4.4	3.9		10.6	8.0	20.2
62.5 and under 67.5 cents	7.2	6.8	11.5	1.4	5.9	5.6		13.2	13.9	11.0
67.5 and under 72.5 cents	6.7	6.6	7.8	1.3	5.7	5.6		12.0	13.2	7.8
72.5 and under 77.5 cents	8.2	8.5	4.5	4.0	7.5	7.5		12.3	14.5	4.0
77.5 and under 82.5 cents	7.4	7.6	5.0	3.7	10.0	10.1		7.0	7.6	4.6
82.5 and under 87.5 cents	6.5	6.9	1.8	4.9	9.4	9.5		4.2	5.1	1.0
87.5 and under 92.5 cents	6.5	7.0	1.1	6.6	9.2	9.4		3.2	3.8	.8
92.5 and under 97.5 cents	6.9	7.5	.5	8.6	9.6	9.9		2.4	2.9	.6
97.5 and under 102.5 cents	6.0	6.5	.5	9.6	7.5	7.7		1.4	1.6	.6
102.5 and under 112.5 cents	9.5	10.4	.2	18.5	10.7	11.0		1.4	1.7	.2
112.5 and under 122.5 cents	6.9	7.4	.2	15.8	6.2	6.4		.8	1.0	.2
122.5 and under 132.5 cents	3.9	4.2		10.2	2.8	2.9		.3	.4	
132.5 and under 142.5 cents	2.0	2.2		5.9	1.1	1.1		.1	.1	
142.5 and under 152.5 cents	1.2	1.3		4.1	.3	.3				
152.5 and under 162.5 cents	.7	.8		2.6	.1	.1			(2)	
162.5 cents and over	.4	.5		1.6	(2)	(2)				
Total	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0

MISCELLANEOUS PRODUCTS [1]

25.0 and under 27.5 cents	(2)	(2)			(2)	0.1				
30.0 and under 32.5 cents	0.2	0.2	(2)					0.4	0.6	0.1
32.5 and under 35.0 cents	.1	.1	0.1					.2	.2	.2
35.0 and under 37.5 cents	.3	.3	.2		(2)	(2)		.7	.9	.2
37.5 and under 40.0 cents	.3	.2	.3					.6	.7	.4
40.0 and under 42.5 cents	2.2	1.4	5.4	0.1	1.2	.7	5.9	4.2	3.5	5.3
42.5 and under 47.5 cents	3.9	2.9	8.0	.1	1.7	1.2	6.9	7.8	7.4	8.3
47.5 and under 52.5 cents	8.8	6.8	16.4	.2	4.8	3.2	19.7	16.4	17.1	15.5
52.5 and under 57.5 cents	9.9	6.9	21.7	.7	5.9	3.4	28.9	17.7	16.5	19.7
57.5 and under 62.5 cents	10.3	9.2	15.6	.8	10.1	9.3	17.0	15.0	15.0	15.1
62.5 and under 67.5 cents	9.6	9.1	11.5	1.6	10.8	11.3	5.7	12.1	11.5	12.9
67.5 and under 72.5 cents	8.2	8.3	7.7	2.0	11.0	11.6	5.9	8.3	8.5	8.1
72.5 and under 77.5 cents	7.3	7.6	6.2	2.7	10.3	10.9	4.2	6.6	6.4	6.8
77.5 and under 82.5 cents	7.0	7.8	3.8	5.4	11.3	12.1	2.9	3.7	3.4	4.0
82.5 and under 87.5 cents	6.2	7.3	1.9	6.4	10.0	10.9	2.5	2.4	2.8	1.8
87.5 and under 92.5 cents	4.4	5.3	.8	7.0	6.4	7.1	.2	1.3	1.5	.9
92.5 and under 97.5 cents	3.9	4.9	.2	7.9	5.3	5.9		.8	1.2	.3
97.5 and under 102.5 cents	3.7	4.6	.2	9.8	4.1	4.5	.2	.6	.8	.2
102.5 and under 112.5 cents	5.8	7.3	(2)	19.2	5.0	5.5		.5	.8	.1
112.5 and under 122.5 cents	3.7	4.6		15.5	1.6	1.8		.4	.6	
122.5 and under 132.5 cents	2.1	2.6	(2)	10.0	.4	.4		.2	.4	.1
132.5 and under 142.5 cents	1.2	1.4		5.6	.1	.1		.1	.2	
142.5 and under 152.5 cents	.6	.7		3.1	(2)	(2)				
152.5 and under 162.5 cents	.2	.3		1.2						
162.5 cents and over	.1	.2		.7						
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] A small number of skilled workers are included in the "semiskilled, female" classification in this division.
[2] Less than a tenth of 1 percent.
[3] There were not enough semiskilled female workers in this division to justify the presentation of a separate distribution.

Average Hourly Earnings, by Occupational Groups

Average hourly earnings, by occupational groups, are shown in table 2. Tool and die makers were the highest-paid occupation in 6 of the 14 industry divisions, i. e., those manufacturing fuses, signaling

devices, wire and cable, electrical measuring instruments, domestic appliances, and storage batteries; their averages ranged from 88.5 cents in the signaling-apparatus division to $1.054 in the domestic-appliance division. Millwrights and other maintenance workers ($1.08) received the highest pay in the lamp division, skilled assemblers ($1.136) in the industrial-controls division, skilled boring-mill operators ($1.259) in the integral-horsepower motors division, skilled milling-machine operators ($1.247) in the transformers and switchgear division, etc.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*

FUSES, WIRING DEVICES, AND SPECIALTY TRANSFORMERS

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	1,501	$0.621	41.8	$25.94	2,487	$0.411	37.6	$15.44
Skilled workers	318	.858	43.7	37.51				
Foremen, working	75	.787	44.6	35.08				
Machinists	37	.841	45.9	38.57				
Millwrights and other maintenance workers	19	.700	51.4	35.99				
Miscellaneous machine operators, skilled	21	.812	38.6	31.34				
Miscellaneous skilled workers, direct	20	.937	38.7	36.28				
Miscellaneous skilled workers, indirect	31	.762	42.8	32.66				
Set-up men, machine, skilled	14	.823	39.2	32.25				
Tool and die makers	101	.981	43.8	42.97				
Semiskilled workers	606	.610	40.9	24.96	200	.459	38.7	17.77
Apprentices	26	.465	43.4	20.20				
Assemblers, semiskilled, class 2	17	.690	38.7	26.70	41	.491	35.3	17.35
Buffers and polishers	22	.650	41.2	26.78	3	(1)	(1)	(1)
Die setters	20	.696	40.4	28.10				
Inspectors, semiskilled	26	.681	41.2	28.09	4	(1)	(1)	(1)
Miscellaneous machine operators, semiskilled	57	.646	40.8	26.35	11	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	51	.683	40.6	27.69	[2] 53	.455	41.2	18.74
Miscellaneous semiskilled workers, indirect	72	.638	41.5	26.49	11	(1)	(1)	(1)
Molders, plastic	96	.699	34.8	24.31	12	(1)	(1)	(1)
Platers	20	.697	40.3	28.08				
Punch-press operators, semiskilled	99	.544	41.1	22.33	59	.441	39.9	17.61
Shipping and receiving clerks	36	.563	44.0	24.76	3	(1)	(1)	(1)
Stock clerks	45	.476	45.8	21.76	3	(1)	(1)	(1)
Watchmen	19	.479	51.7	24.74				
Unskilled workers	577	.494	41.6	20.58	2,287	.406	37.5	15.24
Assemblers, unskilled	124	.476	41.0	19.53	1,560	.409	37.0	15.11
Burrers and rough grinders	12	(1)	(1)	(1)	19	.498	35.4	17.63
Common laborers	42	.487	41.5	20.22	1	(1)	(1)	(1)
Drill-press operators, unskilled	34	.432	46.2	19.97	59	.421	39.5	16.60
Helpers, foundry and machine	19	.614	42.8	26.23				
Helpers, maintenance	35	.577	40.1	23.16				
Inspectors, unskilled	10	(1)	(1)	(1)	57	.396	38.7	15.31
Janitors	17	.433	42.6	18.47	6	(1)	(1)	(1)
Learners	39	.425	38.3	16.26	57	.304	34.8	10.56
Miscellaneous unskilled workers, direct	29	.562	39.7	22.28	14	(1)	(1)	(1)
Miscellaneous unskilled workers, indirect	34	.515	40.4	20.77	7	(1)	(1)	(1)
Packers and wrappers	33	.504	42.9	21.60	105	.399	38.7	15.42
Platers' helpers	23	.487	49.7	24.24				
Punch-press operators, unskilled	14	(1)	(1)	(1)	108	.407	40.5	16.50
Riveters	3	(1)	(1)	(1)	73	.435	39.4	17.17
Solderers	17	.379	38.0	14.40	124	.399	38.9	15.53
Stampers, markers, and labelers	14	(1)	(1)	(1)	28	.373	37.8	14.11
Stock- and shipping-room laborers	41	.452	39.9	18.05				
Testers, unskilled	5	(1)	(1)	(1)	27	.399	39.6	15.78
Truckers, hand	23	.466	50.2	23.41				
Winders, unskilled	9	(1)	(1)	(1)	42	.427	37.0	15.79

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[2] Includes 24 working forewomen classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

SIGNALING APPARATUS

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	1,148	$0.566	40.9	$23.15	388	$0.413	33.6	$13.89
Skilled workers	185	.803	43.4	34.82				
Assemblers, skilled	22	.748	45.1	33.69				
Foremen, working	52	.835	42.0	35.11				
Machinists	20	.780	43.8	34.18				
Miscellaneous machine operators, skilled	11	.780	43.9	34.23				
Miscellaneous skilled workers, direct	17	.782	43.5	34.02				
Miscellaneous skilled workers, indirect	17	.644	48.6	31.28				
Tool and die makers	46	.885	41.9	37.05				
Semiskilled workers	557	.562	41.8	23.50	21	(1)	(1)	(1)
Apprentices	14	.448	44.2	19.78				
Assemblers, semiskilled, class 1	47	.714	43.7	31.17				
Assemblers, semiskilled, class 2	115	.559	42.3	23.67	1	(1)	(1)	(1)
Buffers and polishers	24	.650	38.7	25.14				
Clerks, factory	16	.448	40.5	18.16	2	(1)	(1)	(1)
Drill-press operators, semiskilled	42	.495	40.7	20.12				
Inspectors, semiskilled	16	.631	42.0	26.50				
Miscellaneous machine operators, semiskilled	55	.554	42.5	23.53				
Miscellaneous semiskilled workers, direct	37	.590	41.5	24.49	[3] 14	(1)	(1)	(1)
Miscellaneous semiskilled workers, indirect	18	.568	41.9	23.76				
Painters, spray	16	.558	41.1	22.96	3	(1)	(1)	(1)
Punch-press operators, semiskilled	74	.531	39.2	20.82				
Shipping and receiving clerks	22	.544	44.2	24.06				
Stock clerks	27	.475	42.0	19.95	1	(1)	(1)	(1)
Testers, semiskilled	15	.646	44.7	28.87				
Watchmen	19	.497	44.8	22.27				
Unskilled workers	406	.451	38.4	17.34	367	.408	33.5	13.67
Assemblers, unskilled	180	.458	36.5	16.72	171	.407	32.6	13.26
Common laborers	10	.437	45.9	20.05				
Drill-press operators, unskilled	26	.437	40.7	17.75	6	(1)	(1)	(1)
Helpers, maintenance	10	.487	52.4	25.52				
Janitors	20	.449	43.9	19.72	1	(1)	(1)	(1)
Learners	54	.415	35.7	14.82	25	.361	34.0	12.28
Miscellaneous unskilled workers, direct	51	.448	38.9	17.43	18	.408	32.7	13.33
Miscellaneous unskilled workers, indirect	17	.453	46.0	20.83				
Packers and wrappers	11	.481	40.2	19.33	19	.409	37.7	15.38
Punch-press operators, unskilled	18	.458	35.0	16.05	39	.411	34.6	14.24
Solderers					27	.401	30.3	12.17
Testers, unskilled	8	(1)	(1)	(1)	14	.456	34.6	15.75
Winders, unskilled	1	(1)	(1)	(1)	47	.426	35.0	14.91

DRY BATTERIES

All workers	658	$0.608	43.2	$26.24	559	$0.448	40.7	$18.24
Skilled workers	50	.784	49.2	38.57				
Foremen, working	24	.754	48.5	36.58				
Miscellaneous skilled workers, direct	15	.800	48.6	38.82				
Miscellaneous skilled workers, indirect	11	.824	51.7	42.58				
Semiskilled workers	192	.609	43.5	26.53	85	.455	41.4	18.87
Assemblers, semiskilled	37	.628	43.9	27.60	54	.465	41.1	19.13
Miscellaneous semiskilled workers, direct	93	.607	42.6	25.85	[4] 28	.435	41.5	18.04
Miscellaneous semiskilled workers, indirect	28	.632	49.9	31.56	3	(1)	(1)	(1)
Tamper operators	34	.570	40.5	23.07				
Unskilled workers	416	.582	42.3	24.62	474	.446	40.6	18.13
Assemblers, unskilled	191	.598	42.6	25.45	341	.445	40.4	18.00
Miscellaneous unskilled workers, direct	105	.562	43.4	24.41	51	.440	40.9	17.97
Miscellaneous unskilled workers, indirect	72	.548	41.3	22.64	13	.470	39.2	18.42
Packers and wrappers	11	.572	42.2	24.15	29	(1)	(1)	(1)
Solderers	37	(1)	(1)	(1)	40	.461	42.5	19.59

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[3] Includes 6 working forewomen classed as skilled workers.
[4] Includes 1 working forewoman classed as a skilled worker.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

CARBON PRODUCTS

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	715	$0.606	46.3	$28.09	171	$0.461	40.4	$18.64
Skilled workers	86	.788	50.2	39.53				
Foremen, working	43	.789	52.9	41.75				
Machinists	11	.793	44.8	35.50				
Miscellaneous skilled workers, direct	14	.868	48.4	42.06				
Miscellaneous skilled workers, indirect	18	.720	48.2	34.72				
Semiskilled workers	273	.633	46.6	29.51	6	(1)	(1)	(1)
Clerks, factory	12	.568	49.5	28.09	1	(1)	(1)	(1)
Cutters	46	.564	46.5	26.22				
Grinders, brushes	65	.672	45.1	30.30				
Inspectors, semiskilled	14	.596	48.1	28.62				
Miscellaneous furnace and oven men, semiskilled	21	.741	47.6	35.25				
Miscellaneous machine operators, semiskilled	11	.735	44.0	32.30				
Miscellaneous semiskilled workers, direct	16	.623	43.9	27.32	[4] 1	(1)	(1)	(1)
Miscellaneous semiskilled workers, indirect	11	.646	48.0	31.02				
Mixers	22	.617	47.6	29.39				
Molders	34	.681	48.0	32.74	1	(1)	(1)	(1)
Stock clerks	10	.515	49.1	25.28	3	(1)	(1)	(1)
Watchmen	11	.518	45.0	23.29				
Unskilled workers	356	.536	45.2	24.25	165	.460	40.4	18.57
Assemblers, unskilled	77	.505	44.4	22.41	89	.494	39.7	19.63
Common laborers	31	.521	47.7	24.84				
Crusher operators and pulverizers	12	.628	49.0	30.78				
Drill-press operators, unskilled	10	.594	39.0	23.15	1	(1)	(1)	(1)
Helpers, production line	52	.536	42.1	22.57	16	(1)	(1)	(1)
Inspectors and testers	26	.477	46.7	22.28	22	.438	40.3	17.68
Miscellaneous furnace and oven men, unskilled	71	.583	46.3	26.95				
Packers and wrappers	22	.546	48.0	26.19	9	(1)	(1)	(1)
Miscellaneous unskilled workers, direct	24	.469	42.2	19.79	28	.407	39.7	16.15
Miscellaneous unskilled workers, indirect	31	.558	47.3	26.39				

ELECTRIC LAMPS

All workers	746	$0.781	41.2	$32.15	2,197	$0.535	39.0	$20.91
Skilled workers	296	.934	41.1	38.39				
Foremen, working	36	.926	42.1	38.95				
Lamp-machine adjusters and repairmen, skilled	115	.840	41.0	34.39				
Machinists	22	.918	42.1	38.67				
Mechanics, machine repair	30	1.002	40.9	40.95				
Millwrights and other maintenance workers	39	1.080	40.4	43.65				
Miscellaneous skilled workers, direct	25	1.030	42.5	43.76				
Miscellaneous skilled workers, indirect	29	.981	39.8	38.99				
Semiskilled workers	227	.704	41.7	29.33	1,324	.541	39.1	21.12
Basers	1	(1)	(1)	(1)	241	.539	39.1	21.07
Clerks, factory	28	.674	39.5	26.65	18	.486	40.3	19.61
Coilers	16	(1)	(1)	(1)	64	.541	39.8	21.51
Discers					17	.575	37.0	21.30
Exhausters	17	.709	38.8	27.54	119	.551	38.8	21.38
Miscellaneous semiskilled workers, direct	77	.740	41.6	30.77	[5] 153	.557	39.5	21.99
Miscellaneous semiskilled workers, indirect	53	.730	42.2	30.79	20	.575	39.9	22.93
Mounters					297	.527	39.1	20.58
Sealers					115	.547	38.9	21.27
Stem and bead makers	3	(1)	(1)	(1)	91	.500	38.4	19.18
Testers and inspectors	10	(1)	(1)	(1)	189	.560	39.0	21.82
Watchmen	22	.679	44.8	30.38				

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[4] Includes 1 working forewoman classed as a skilled worker.
[5] Includes 2 lamp-machine adjusters and 9 working forewomen classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

ELECTRIC LAMPS—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Unskilled workers	223	$0.656	40.7	$26.72	873	$0.527	39.0	$20.58
Assemblers, unskilled	3	(1)	(1)	(1)	180	.545	38.7	21.07
Base fillers	3	(1)	(1)	(1)	49	.537	39.0	20.97
Bulb sprayers	1	(1)	(1)	(1)	59	.540	39.7	21.47
Cleaners, parts	5	(1)	(1)	(1)	22	.556	39.4	21.93
Cutters, coil and wire	------	------	------	------	17	.496	39.3	19.48
Etchers and markers	------	------	------	------	30	.526	40.0	21.04
Inserters	------	------	------	------	33	.506	37.4	18.94
Janitors	29	.659	40.1	26.44	10	(1)	(1)	(1)
Learners	2	(1)	(1)	(1)	36	.383	37.6	14.40
Material handlers	58	.665	40.0	26.63	16	.530	40.1	21.24
Miscellaneous unskilled workers, direct	33	.624	41.9	26.12	65	.527	38.3	20.19
Miscellaneous unskilled workers, indirect	47	.645	41.1	26.52	17	.534	40.0	21.35
Packers and wrappers	36	.735	40.1	29.48	60	.512	38.9	19.91
Solderers	------	------	------	------	36	.540	39.0	21.06
Testers and inspectors	6	(1)	(1)	(1)	243	.532	39.6	21.06
WIRE AND CABLE								
All workers	6,130	$0.649	40.6	$26.36	772	$0.451	36.9	$16.67
Skilled workers	626	.861	41.8	36.03	------	------	------	------
Carpenters, skilled	25	.837	42.5	35.62	------	------	------	------
Electricians, maintenance	55	.802	40.7	32.63	------	------	------	------
Foremen, working	201	.856	44.4	37.98	------	------	------	------
Machinists	132	.882	40.9	36.12	------	------	------	------
Millwrights and other maintenance workers	39	.731	41.8	30.53	------	------	------	------
Miscellaneous skilled workers, direct	28	.926	36.9	34.17	------	------	------	------
Miscellaneous skilled workers, indirect	57	.829	41.4	34.32	------	------	------	------
Pipefitters and plumbers	30	.820	42.9	34.42	------	------	------	------
Tool and die makers	59	1.028	38.5	39.57	------	------	------	------
Semiskilled workers	2,584	.685	40.5	27.70	115	.499	38.0	18.98
Apprentices	29	.521	37.9	19.78	------	------	------	------
Armoring-machine operators	105	.683	39.1	26.73	------	------	------	------
Calender operators	17	.713	41.0	29.19	------	------	------	------
Carpenters, semiskilled	65	.658	42.9	28.24	------	------	------	------
Checkers	24	.709	36.5	25.52	------	------	------	------
Clerks, factory	58	.620	41.8	25.91	14	(1)	(1)	(1)
Drawers	248	.820	38.0	31.18	------	------	------	------
Enamelers and lacquerers	55	.815	38.3	31.22	------	------	------	------
Inspectors, semiskilled	83	.684	40.9	27.93	1	(1)	(1)	(1)
Lead-press operators	45	.764	44.1	33.67	------	------	------	------
Millmen	16	.691	36.7	25.32	------	------	------	------
Miscellaneous furnace and oven workers, semiskilled	103	.835	39.9	33.34	6	(1)	(1)	(1)
Miscellaneous machine operators, semiskilled	42	.729	41.7	30.40	3	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	69	.641	41.8	26.80	[2] 9	(1)	(1)	(1)
Miscellaneous semiskilled workers, indirect	75	.682	42.4	28.91	------	------	------	------
Mixers, compound	105	.661	38.9	25.74	------	------	------	------
Oilers and motor tenders	28	.579	40.6	23.51	------	------	------	------
Picklers	38	.862	39.3	33.83	------	------	------	------
Repairmen and fixers, wire machine	104	.708	42.7	30.23	------	------	------	------
Repairmen, product	81	.568	36.0	20.46	3	(1)	(1)	(1)
Shipping and receiving clerks	86	.605	42.9	25.97	2	(1)	(1)	(1)
Slitter operators	18	.704	38.2	26.94	------	------	------	------
Stock clerks	48	.631	44.0	27.80	7	(1)	(1)	(1)
Stranders	126	.668	43.3	28.95	2	(1)	(1)	(1)
Strip insulating operators	33	.695	34.1	23.70	2	(1)	(1)	(1)
Tapers	239	.658	41.1	27.07	64	.480	37.3	17.91
Testers, semiskilled	101	.696	38.2	26.58	1	(1)	(1)	(1)
Tinners	68	.706	40.7	28.73	------	------	------	------
Truck drivers	30	.661	47.1	31.17	------	------	------	------
Truck operators, electric and gas	55	.653	36.9	24.09	------	------	------	------

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[2] Includes 8 working forewomen classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

WIRE AND CABLE—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Semiskilled workers—Continued.								
Tubers	199	$0.652	40.1	$26.13	1	(1)	(1)	(1)
Vulcanizers	31	.626	38.5	24.11				
Warming-mill operators	39	.641	37.5	24.03				
Watchmen	91	.558	45.7	25.46				
Unskilled workers	2,920	.571	40.5	23.11	657	$0.442	36.8	$16.27
Assemblers, unskilled	27	.420	48.0	20.14	166	.399	36.1	14.38
Braiders	339	.547	38.1	20.85	159	.445	37.8	16.81
Coilers	173	.582	39.1	22.76	17	(1)	(1)	(1)
Common laborers	183	.560	40.2	22.50	1	(1)	(1)	(1)
Helpers, foundry and machine	31	.618	42.1	26.04				
Helpers, maintenance	98	.617	41.1	25.36				
Inspectors, unskilled	41	.574	41.2	23.68	37	.505	39.1	19.77
Janitors	88	.549	40.0	21.98	5	(1)	(1)	(1)
Learners	54	.508	39.4	20.03	17	(1)	(1)	(1)
Material handlers	239	.553	39.9	22.09				
Miscellaneous unskilled workers, direct	113	.553	38.8	21.44	41	.386	37.8	14.58
Miscellaneous unskilled workers, indirect	112	.610	39.1	23.86	10	(1)	(1)	(1)
Packers and wrappers	64	.611	40.2	24.58	20	(1)	(1)	(1)
Panners	50	.566	47.4	26.81				
Saturators and finishers	304	.585	39.3	23.01	6	(1)	(1)	(1)
Spoolers and respoolers, wire	243	.596	42.3	25.21	90	.477	37.4	17.83
Stock- and shipping-room laborers	129	.552	43.3	23.87				
Strainers	25	.540	46.2	24.95				
Testers, unskilled	138	.599	39.4	23.62	9	(1)	(1)	(1)
Twisters and bunchers	107	.547	42.4	23.22	13	(1)	(1)	(1)
Weighers	37	.623	39.2	24.43	3	(1)	(1)	(1)
Winders, nonmetallic	9	(1)	(1)	(1)	62	.490	32.1	15.74
Wire production helpers	316	.575	41.5	23.90	1	(1)	(1)	(1)
ELECTRICAL MEASURING INSTRUMENTS								
All workers	1,555	$0.723	40.4	$29.22	1,040	$0.502	39.3	$19.74
Skilled workers	321	.902	40.7	36.70				
Foremen, working	92	.892	41.7	37.23				
Machinists	16	.835	39.7	33.12				
Miscellaneous machine operators, skilled	30	.896	39.7	35.58				
Miscellaneous skilled workers, direct	47	.876	39.8	34.85				
Miscellaneous skilled workers, indirect	39	.802	42.2	33.88				
Set-up men, machines, skilled	23	.920	40.5	37.24				
Tool and die makers	74	.997	39.9	39.77				
Semiskilled workers	861	.713	40.3	28.76	285	.517	39.3	20.29
Apprentices	24	.525	40.4	21.22				
Assemblers, semiskilled	124	.726	40.8	29.61	39	.575	36.6	21.05
Clerks, factory	11	(1)	(1)	(1)	78	.488	39.9	19.47
Drill-press operators, semiskilled	53	.729	38.8	28.29	12	(1)	(1)	(1)
Grinding-machine operators, semiskilled	16	.752	40.5	30.43	9	(1)	(1)	(1)
Inspectors, semiskilled	49	.682	41.1	28.02	73	.515	39.5	20.37
Lathe operators, engine, semiskilled	40	.716	37.9	27.17	10	(1)	(1)	(1)
Milling-machine operators, semiskilled	18	.653	41.8	27.30	2	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	128	.774	40.5	31.35	[4] 38	.523	38.9	20.36
Miscellaneous semiskilled workers, indirect	62	.669	42.3	28.31	1	(1)	(1)	(1)
Painters, spray	20	.755	40.0	30.21				
Platers	15	.732	41.1	30.05				
Punch-press operators, semiskilled	66	.715	38.3	27.38				
Screw-machine operators, semiskilled	54	.834	39.6	33.00				
Stock clerks	39	.586	40.6	23.75	2	(1)	(1)	(1)
Testers, semiskilled	116	.661	41.4	27.37	20	.525	40.0	20.99
Winders, semiskilled	26	.886	39.1	34.68	1	(1)	(1)	(1)

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[4] Includes 1 working forewoman classed as a skilled worker.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

ELECTRICAL MEASURING INSTRUMENTS—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Unskilled workers	373	$0.592	40.3	$24.84	755	$0.497	39.3	$19.54
Assemblers, unskilled	96	.585	41.2	24.06	390	.502	39.7	19.92
Drill-press operators, unskilled	11	(1)	(1)	(1)	24	.534	39.5	21.07
Inspectors, unskilled	6	(1)	(1)	(1)	48	.422	38.2	16.09
Janitors	50	.563	41.7	23.51				
Lathe operators, engine, unskilled	5	(1)	(1)	(1)	91	.516	38.3	19.77
Miscellaneous unskilled workers, direct	80	.618	39.7	24.56	84	.501	39.4	19.76
Miscellaneous unskilled workers, indirect	30	.581	38.6	22.43				
Packers and wrappers	34	.570	40.6	23.13	8	(1)	(1)	(1)
Punch-press operators, unskilled					32	.525	37.7	19.77
Testers, unskilled	23	.567	41.0	23.26	24	.440	40.8	17.93
Truckers, hand	24	.580	39.4	22.89				
Winders, unskilled	14	(1)	(1)	(1)	54	.502	39.2	19.70
DOMESTIC APPLIANCES								
All workers	2,456	$0.708	39.6	$28.02	1,020	$0.461	38.5	$17.74
Skilled workers	665	.941	40.0	37.68				
Buffers and polishers, appliances	304	.941	38.2	35.96				
Foremen, working	110	.947	42.6	40.31				
Millwrights and other maintenance workers	27	.750	43.9	32.97				
Miscellaneous machine operators, skilled	33	.917	39.2	35.95				
Miscellaneous skilled workers, direct	65	.864	38.5	33.29				
Miscellaneous skilled workers, indirect	21	.907	42.6	38.62				
Screw-machine operators, automatic, skilled	15	.967	39.7	38.37				
Tool and die makers	90	1.054	42.9	45.17				
Semiskilled workers	839	.680	40.6	27.61	163	.480	39.8	19.10
Apprentices	16	.525	41.4	21.72				
Assemblers, semiskilled, class 2	105	.671	39.5	26.54	74	.445	38.6	17.16
Balancers	4	(1)	(1)	(1)	16	.488	40.0	19.50
Clerks, factory	45	.617	40.5	25.00	9	(1)	(1)	(1)
Die setters	15	.837	40.5	33.86				
Drill-press operators, semiskilled	66	.682	38.1	25.98	18	.486	41.5	20.17
Grinding-machine operators, semiskilled	17	.793	40.2	31.92	1	(1)	(1)	(1)
Inspectors, semiskilled, class 1	26	.815	40.8	33.23				
Inspectors, semiskilled, class 2	44	.648	39.3	25.48	7	(1)	(1)	(1)
Miscellaneous machine operators, semiskilled	39	.664	41.0	27.24	3	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	60	.738	39.8	29.35	[7] 10	(1)	(1)	(1)
Miscellaneous semiskilled workers, indirect	64	.735	39.7	29.16				
Painters, spray	14	.768	44.2	33.97	3	(1)	(1)	(1)
Platers	35	.776	39.6	30.74				
Punch-press operators, semiskilled	119	.616	42.2	26.02	20	.563	39.2	22.10
Repairmen, product	48	.664	39.4	26.16	1	(1)	(1)	(1)
Screw-machine operators, automatic, semiskilled	13	.633	39.8	25.21				
Screw-machine operators, hand, semiskilled	26	.739	39.5	29.21				
Shearmen	15	.896	39.1	35.04				
Stock clerks	31	.636	41.6	26.45	1	(1)	(1)	(1)
Watchmen	37	.568	48.7	27.66				
Unskilled workers	952	.564	38.3	21.62	857	.457	38.3	17.48
Assemblers, unskilled	224	.559	37.5	20.97	561	.470	38.3	17.98
Burrers and rough grinders	38	.682	36.4	24.82				
Cleaners, parts	21	.656	40.2	26.36	10	(1)	(1)	(1)
Common laborers	53	.493	35.4	17.44	7	(1)	(1)	(1)
Drill-press operators, unskilled	33	.586	41.7	24.42	14	(1)	(1)	(1)
Helpers, maintenance	29	.684	38.3	26.20				
Inspectors, unskilled	68	.605	37.0	22.40	54	.509	36.0	18.29
Janitors	27	.590	42.5	25.11	12	(1)	(1)	(1)
Learners	46	.336	36.9	12.41	47	.257	42.4	10.91

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[7] Includes 5 working forewomen classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

DOMESTIC APPLIANCES—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Unskilled workers—Continued.								
Material handlers	97	$0.604	38.7	$23.39	1	(1)	(1)	(1)
Miscellaneous unskilled workers, direct	62	.612	38.3	23.43	56	$0.428	40.9	$17.51
Miscellaneous unskilled workers, indirect	31	.566	41.1	23.28	1	(1)	(1)	(1)
Packers and wrappers	49	.572	38.1	21.77	18	.447	39.9	17.86
Platers' helpers	40	.620	39.7	24.62	1	(1)	(1)	(1)
Punch-press operators, unskilled	64	.447	38.8	17.34	15	.530	36.4	19.27
Rackers and unrackers	22	.403	37.4	15.06	4	(1)	(1)	(1)
Screw-machine operators, hand, unskilled	17	.609	40.2	24.46				
Stock- and shipping-room laborers	30	.608	41.5	25.23				
Winders, unskilled	1	(1)	(1)	(1)	56	.491	35.9	17.59

FRACTIONAL-HORSEPOWER MOTORS

All workers	4,179	$0.714	41.7	$29.78	1,537	$0.533	38.5	$20.49
Skilled workers	855	.938	43.0	40.35				
Electricians, maintenance	31	.957	47.9	45.83				
Foremen, working	132	.944	43.0	40.62				
Grinding-machine operators, skilled	63	.981	41.0	40.27				
Lathe operators, engine, skilled	74	.877	41.8	36.67				
Machinists	34	.904	45.3	40.98				
Mechanics, machine repair	25	.993	40.9	40.65				
Miscellaneous machine operators, skilled	98	.913	44.9	40.98				
Miscellaneous skilled workers, direct	61	.957	41.1	39.28				
Miscellaneous skilled workers, indirect	67	.874	43.0	37.61				
Screw-machine operators, automatic, skilled	28	.953	41.1	39.22				
Set-up men, machine, skilled	47	.907	41.4	37.56				
Tool and die makers	172	.990	44.2	44.81				
Welders and brazers	23	.823	38.4	31.56				
Semiskilled workers	1,823	.712	41.3	29.40	98	.606	39.3	23.86
Apprentices	50	.492	43.3	21.29				
Assemblers, semiskilled, class 1	30	.840	37.8	31.74				
Assemblers, semiskilled, class 2	214	.671	41.6	27.93	9	(1)	(1)	(1)
Balancers	26	.692	41.1	28.39				
Buffers and polishers	49	.724	39.4	28.53				
Clerks, factory	33	.585	42.6	24.91	12	(1)	(1)	(1)
Die setters	22	.770	41.5	31.90				
Drill-press operators, semiskilled	140	.747	39.9	29.82	1	(1)	(1)	(1)
Grinding-machine operators, semiskilled	71	.864	40.2	34.71				
Inspectors, semiskilled, class 1	35	.763	42.1	32.10				
Inspectors, semiskilled, class 2	86	.724	40.3	29.13				
Lathe operators, engine, semiskilled	131	.681	42.8	29.19				
Lathe operators, turret, semiskilled	46	.739	43.5	32.13				
Milling-machine operators, semiskilled	55	.746	41.9	31.22	2	(1)	(1)	(1)
Miscellaneous machine operators, semiskilled	55	.729	43.1	31.37	3	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	102	.716	40.8	29.21	[2] 30	.658	40.5	26.64
Miscellaneous semiskilled workers, indirect	90	.720	43.6	31.39				
Painters, spray	56	.707	41.4	29.29	1	(1)	(1)	(1)
Punch-press operators, semiskilled	152	.740	38.2	28.23	6	(1)	(1)	(1)
Repairmen, product	58	.758	39.9	30.25	9	(1)	(1)	(1)
Screw-machine operators, automatic, semiskilled	42	.725	37.7	27.32				
Screw-machine operators, hand, semiskilled	27	.826	41.0	33.86				
Shipping and receiving clerks	27	.665	44.1	29.32	1	(1)	(1)	(1)
Stock clerks	54	.750	40.3	30.23	1	(1)	(1)	(1)
Storekeepers	36	.745	41.3	30.73				
Testers, semiskilled, class 1	25	.795	42.1	33.48				
Testers, semiskilled, class 2	45	.668	40.8	27.26				
Watchmen	32	.500	50.6	25.29				
Winders, semiskilled	34	.652	44.0	28.70	23	.666	37.8	25.16

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[2] Includes 19 working forewomen classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

FRACTIONAL-HORSEPOWER MOTORS—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Unskilled workers	1,501	$0.584	41.4	$24.21	1,439	$0.528	38.4	$20.27
Assemblers, unskilled	476	.568	40.6	23.07	640	.527	37.5	19.76
Burrers and rough grinders	56	.631	41.9	26.49	2	(1)	(1)	(1)
Common laborers	66	.589	42.5	24.98	2	(1)	(1)	(1)
Drill-press operators, unskilled	58	.596	43.0	25.58	8	(1)	(1)	(1)
Helpers, production	43	.661	39.1	25.84				
Inspectors, unskilled	68	.628	40.8	25.61	28	.462	39.3	18.15
Insulators	5	(1)	(1)	(1)	77	.555	37.8	21.00
Janitors	71	.561	43.1	24.17	5	(1)	(1)	(1)
Lathe operators, engine, unskilled	23	.644	40.2	25.85	2	(1)	(1)	(1)
Learners	52	.440	42.8	18.82	45	.414	42.3	17.53
Material handlers	30	.571	41.6	23.72				
Miscellaneous unskilled workers, direct	89	.608	41.2	25.03	56	.539	38.4	20.67
Miscellaneous unskilled workers, indirect	70	.642	42.0	26.93	2	(1)	(1)	(1)
Packers and wrappers	53	.663	42.5	28.22	8	(1)	(1)	(1)
Punch-press operators, unskilled	60	.532	36.9	19.62	18	.488	37.2	18.14
Stock- and shipping-room laborers	33	.526	41.7	21.95	1	(1)	(1)	(1)
Tapers	3	(1)	(1)	(1)	29	.524	40.1	21.02
Truckers, hand	75	.545	43.0	23.39				
Winders, unskilled	170	.612	43.1	26.36	516	.541	39.2	21.22
INDUSTRIAL CONTROLS								
All workers	5,607	$0.780	41.1	$32.05	1,162	$0.545	36.3	$19.80
Skilled workers	1,440	1.006	41.3	41.54				
Assemblers, skilled	84	1.136	40.3	45.75				
Drill-press operators, skilled	48	.772	42.8	33.04				
Electricians, maintenance	47	.983	44.1	43.31				
Foremen, working	274	1.008	43.4	43.78				
Inspectors, skilled	19	1.093	40.0	43.76				
Layout men, skilled	19	.904	43.7	39.48				
Machinists	82	.904	41.2	37.25				
Mechanics, machine repair	47	.930	41.7	38.80				
Milling-machine operators, skilled	28	1.056	39.5	41.70				
Millwrights and other maintenance workers	37	.803	42.1	33.80				
Miscellaneous machine operators, skilled	146	1.007	41.2	41.46				
Miscellaneous skilled workers, direct	77	1.023	40.2	41.08				
Miscellaneous skilled workers, indirect	85	1.036	43.2	44.73				
Molders, foundry	28	1.043	36.8	38.34				
Pattern makers	34	1.127	37.7	42.51				
Sheet-metal workers, skilled	56	1.071	40.5	43.35				
Tool and die makers	282	1.041	39.6	41.20				
Welders and brazers	47	.982	41.1	40.33				
Semiskilled workers	2,448	.758	41.3	31.31	300	.570	36.5	20.80
Apprentices	91	.524	40.9	21.46				
Assemblers, semiskilled, class 1	258	.864	43.5	37.63	5	(1)	(1)	(1)
Assemblers, semiskilled, class 2	267	.776	39.8	30.87	119	.550	36.8	20.23
Checkers	30	.807	42.0	33.86	3	(1)	(1)	(1)
Clerks, factory	31	.605	44.5	26.93	30	.527	38.7	20.37
Crane operators	34	.834	41.6	34.65				
Die setters	67	.835	38.6	32.19				
Drill-press operators, semiskilled	110	.761	39.7	30.21	4	(1)	(1)	(1)
Inspectors, semiskilled, class 1	24	.842	41.9	35.29				
Inspectors, semiskilled, class 2	46	.718	42.2	30.31	17	(1)	(1)	(1)
Lathe operators, engine, semiskilled	27	.842	40.8	34.35				
Layout men, semiskilled	21	.808	42.0	33.91				
Milling-machine operators, semiskilled	52	.747	40.6	30.30	2	(1)	(1)	(1)
Miscellaneous machine operators, semiskilled	158	.786	40.3	31.67	27	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	99	.833	42.1	35.05	[2] 17	(1)	(1)	(1)
Miscellaneous semiskilled workers, indirect	126	.799	41.9	33.49	4	(1)	(1)	(1)
Painters, spray	48	.741	43.7	32.37	2	(1)	(1)	(1)
Platers	60	.799	38.4	30.68				

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[2] Includes 4 working forewomen and 2 welders and brazers classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

INDUSTRIAL CONTROLS—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Semiskilled workers—Continued.								
Punch-press operators, semiskilled	259	$0.731	39.9	$29.17	58	$0.588	33.4	$19.67
Screw-machine operators, hand	59	.875	37.5	32.80	1	(1)	(1)	(1)
Shearmen	39	.797	40.3	32.00				
Sheet-metal workers, semiskilled	47	.688	41.4	28.50				
Shipping and receiving clerks	67	.650	42.5	27.61				
Stock clerks	185	.645	41.9	27.05	2	(1)	(1)	(1)
Storekeepers	34	.780	45.9	35.80				
Testers, semiskilled, class 1	19	.852	49.6	42.22				
Testers, semiskilled, class 2	50	.714	44.0	31.42	1	(1)	(1)	(1)
Truck operators, electric and gas	35	.710	40.9	29.07				
Watchmen	52	.646	45.9	29.63				
Welders, spot	53	.744	40.9	30.43	8	(1)	(1)	(1)
Unskilled workers	1,719	.619	40.6	25.16	862	.537	36.3	19.45
Assemblers, unskilled	376	.607	43.1	26.13	452	.546	36.5	19.93
Burrers and rough grinders	37	.744	40.7	30.31				
Common laborers	78	593	41.5	24.65				
Drill-press operators, unskilled	150	.573	39.6	22.68	94	.514	35.5	18.25
Helpers, foundry and machine	74	.607	39.2	23.84				
Helpers, maintenance	29	.716	41.6	29.81				
Inspectors, unskilled	24	.592	41.6	24.62	45	.510	37.8	19.28
Janitors	69	.615	40.3	24.81	16	(1)	(1)	(1)
Learners	156	.526	39.2	20.58	28	.415	36.0	14.94
Material handlers	106	.666	37.1	24.71				
Miscellaneous unskilled workers, direct	102	.667	37.9	25.29	14	(1)	(1)	(1)
Miscellaneous unskilled workers, indirect	64	.688	39.5	27.17	5	(1)	(1)	(1)
Packers and wrappers	112	.643	42.2	27.14	55	.494	38.3	18.90
Painters, dip	38	.722	39.2	28.31	5	(1)	(1)	(1)
Platers' helpers	67	.687	37.1	25.49				
Punch-press operators, unskilled	76	.619	39.7	24.60	114	.557	35.7	19.89
Stock- and shipping-room laborers	45	.638	42.7	27.26	1	(1)	(1)	(1)
Testers, unskilled	51	.604	43.6	26.33	1	(1)	(1)	(1)
Truckers, hand	58	.570	42.6	24.31				
Winders, unskilled	7	(1)	(1)	(1)	32	.593	31.7	18.78
STORAGE BATTERIES								
All workers	2,940	$0.788	40.6	$32.01	64	$0.541	39.3	$21.28
Skilled workers	409	.928	41.5	38.56				
Electricians, maintenance	20	.911	41.5	37.76				
Foremen, working	161	.931	42.3	39.43				
Machinists	58	.908	41.5	37.70				
Mechanics, machine repair	37	.896	40.7	36.47				
Millwrights and other maintenance workers	16	.882	40.5	35.71				
Miscellaneous skilled workers, direct	10	.946	40.0	37.84				
Miscellaneous skilled workers, indirect	64	.909	40.6	36.93				
Tool and die makers	43	1.019	41.5	42.26				
Semiskilled workers	1,569	.800	40.7	32.55	18	(1)	(1)	(1)
Assemblers, semiskilled	144	.834	39.8	33.22				
Battery-box makers, wood	29	.760	39.0	29.66				
Burners	96	.838	41.9	35.12				
Casters and molders, grids	129	.884	41.4	36.56				
Casters and molders, parts	51	.736	41.7	30.69				
Chargers	32	.926	39.3	36.45				
Checkers	32	.756	40.9	30.88				
Clerks, factory	33	.769	41.3	31.74	2	(1)	(1)	(1)
Fillers	19	.764	42.1	32.12				
Inspectors, semiskilled	147	.818	40.0	32.74				
Miscellaneous furnace and oven men, semiskilled	19	.839	40.0	33.58				
Miscellaneous machine operators, semiskilled	20	.785	39.1	30.73	8	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	165	.797	38.9	31.03	[4] 1	(1)	(1)	(1)

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[4] Includes 1 working forewoman classed as a skilled worker.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

STORAGE BATTERIES—Continued

Skill and occupation	Males			Females				
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Semiskilled workers—Continued.								
Miscellaneous semiskilled workers, indirect	66	$0.776	40.5	$31.45				
Mixers, paste and compound	19	.817	41.3	33.71				
Oilers and motor tenders	16	.869	37.6	32.69				
Painters, spray	16	.753	40.9	30.82				
Pasters	118	.870	40.0	34.84				
Plate formers	15	.741	41.7	30.85				
Repairmen, product	31	.821	41.3	33.87				
Sealers	29	.804	44.2	35.53				
Separators, inserters	39	.708	42.5	30.04				
Separator makers	17	.794	42.8	33.99				
Separator treaters	12	.773	43.7	33.77	7	(1)	(1)	(1)
Shipping and receiving clerks	26	.732	40.9	29.93				
Stock clerks	38	.684	40.2	27.52				
Trimmers	92	.759	40.5	30.71				
Truck drivers	15	.686	41.3	28.32				
Truck operators, electric and gas	60	.792	41.6	32.94				
Watchmen	44	.612	44.2	27.09				
Unskilled workers	962	.705	40.2	28.35	46	$0.513	39.5	$20.24
Acid handlers	22	.745	41.5	30.91				
Assemblers, unskilled	92	.784	40.9	32.06	15	(1)	(1)	(1)
Cleaners, parts	20	.795	40.8	32.39				
Common laborers	202	.647	38.4	24.87				
Conveyor loaders and rackers	73	.777	41.5	32.20				
Freight loaders and unloaders	26	.870	43.7	38.04				
Helpers, maintenance	27	.649	40.9	26.58				
Helpers, production line	97	.690	40.9	28.19	2	(1)	(1)	(1)
Inspectors, unskilled	63	.686	40.5	27.82	23	.462	39.3	18.17
Janitors	49	.628	39.2	24.61				
Learners	70	.641	38.2	24.45	1	(1)	(1)	(1)
Material handlers	22	.748	40.5	30.27				
Miscellaneous unskilled workers, direct	59	.687	41.1	28.25	5	(1)	(1)	(1)
Miscellaneous unskilled workers, indirect	37	.682	40.7	27.77				
Packers and wrappers	60	.782	41.3	32.26				
Stock- and shipping-room laborers	26	.701	41.7	29.21				
Truckers	17	.688	39.0	26.81				

INTEGRAL-HORSEPOWER MOTORS AND GENERATORS

All workers	6,002	$0.882	41.8	$36.91	608	$0.579	38.0	$22.01
Skilled workers	2,154	1.097	41.3	45.33				
Assemblers, skilled	110	1.216	40.6	49.43				
Boring-mill operators, skilled	108	1.259	40.1	50.52				
Carpenters, skilled	30	1.069	43.5	46.52				
Coremakers	23	1.114	41.1	45.78				
Drill-press operators, skilled	53	1.010	41.1	41.51				
Electricians, maintenance	57	1.021	44.2	45.18				
Foremen, working	324	1.162	42.0	48.81				
Grinding-machine operators, skilled	31	1.097	39.6	43.46				
Inspectors, skilled	39	1.047	40.6	42.53				
Lathe operators, engine, skilled	110	1.173	42.0	49.22				
Lathe operators, turret, skilled	106	1.050	40.6	42.67				
Layout men, skilled	47	1.196	43.3	51.76				
Machinists	117	.996	40.5	40.29				
Mechanics, machine repair	45	1.048	41.7	43.69				
Milling-machine operators, skilled	83	1.120	39.2	43.89				
Miscellaneous machine operators, skilled	114	1.026	39.6	40.57				
Miscellaneous skilled workers, direct	65	1.120	40.6	45.42				
Miscellaneous skilled workers, indirect	84	1.022	44.3	45.28				
Molders, foundry	50	1.139	38.4	43.73				
Pattern makers	45	1.194	40.9	48.81				
Pipe fitters and plumbers	34	1.161	40.6	47.20				
Set-up men, machines, skilled	35	1.070	44.6	47.69				
Sheet-metal workers, skilled	26	.993	38.8	38.50				
Testers, skilled	28	1.068	44.4	47.39				
Tinsmiths and sheet-metal workers	25	1.034	46.0	47.55				

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

INTEGRAL-HORSEPOWER MOTORS AND GENERATORS—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Skilled workers—Continued.								
Tool and die makers	180	$1.036	41.3	$42.76				
Welders and brazers	164	1.004	41.1	41.22				
Winders, skilled	21	1.158	41.5	48.12				
Semiskilled workers	2,584	.810	42.1	34.11	133	$0.601	38.4	$23.07
Apprentices	120	.517	39.6	20.49				
Assemblers, semiskilled, class 1	245	.957	40.0	38.29	7	(1)	(1)	(1)
Assemblers, semiskilled, class 2	252	.810	43.6	35.28	25	.571	40.0	22.83
Balancers	24	.684	45.1	30.85				
Boring-mill operators, semiskilled	32	.822	42.8	35.20				
Checkers	36	.875	41.7	36.52	1	(1)	(1)	(1)
Crane operators	119	.897	43.9	39.36				
Die setters	35	.850	41.1	34.89				
Drill-press operators, semiskilled	115	.783	43.4	33.97				
Grinding-machine operators, semiskilled	54	.853	40.2	34.25				
Inspectors, semiskilled, class 1	30	.823	42.6	35.10	1	(1)	(1)	(1)
Lathe operators, engine, semiskilled	83	.790	43.6	34.45				
Lathe operators, turret, semiskilled	90	.817	43.0	35.15				
Milling-machine operators, semiskilled	62	.856	41.9	35.90				
Miscellaneous furnace and oven men, semiskilled	45	.956	39.1	37.33				
Miscellaneous machine operators, semiskilled	66	.740	38.1	28.21				
Miscellaneous semiskilled workers, direct	192	.873	41.5	36.22	[10] 21	(1)	(1)	(1)
Miscellaneous semiskilled workers, indirect	206	.808	42.1	33.98	12	(1)	(1)	(1)
Painters, brush	32	.694	46.4	32.17				
Punch-press operators, semiskilled	178	.760	40.2	30.56	6	(1)	(1)	(1)
Repairmen, product	27	.807	45.8	36.97				
Saw operators	26	.900	41.0	36.95				
Screw-machine operators, hand, semiskilled	32	.847	40.3	34.17				
Shipping and receiving clerks	25	.735	42.9	31.53				
Stock clerks	61	.695	41.6	28.95	1	(1)	(1)	(1)
Storekeepers	35	.796	40.2	31.98	1	(1)	(1)	(1)
Testers, semiskilled, class 1	35	.827	45.1	37.31	1	(1)	(1)	(1)
Testers, semiskilled, class 2	27	.660	46.8	30.87	1	(1)	(1)	(1)
Watchmen	49	.674	44.0	29.64				
Welders, spot	32	.836	43.3	36.20	3	(1)	(1)	(1)
Winders, semiskilled	219	.813	43.9	35.67	53	.573	36.1	20.67
Unskilled workers	1,264	.672	42.1	28.28	475	.573	37.9	21.71
Assemblers, unskilled	160	.595	44.9	26.69	91	.595	37.9	22.56
Burrers and rough grinders	108	.735	39.9	29.35	1	(1)	(1)	(1)
Common laborers	117	.608	43.3	26.36				
Drill-press operators, unskilled	31	.574	42.8	24.58	2	(1)	(1)	(1)
Foundry laborers	42	.747	40.0	29.83				
Helpers, foundry and machine	141	.762	40.5	30.83				
Helpers, maintenance	36	.743	45.7	33.96				
Janitors	95	.666	41.0	27.34	15	(1)	(1)	(1)
Learners	59	.499	41.5	20.71	25	.433	33.5	14.52
Material handlers	90	.780	41.0	31.96				
Miscellaneous unskilled workers, direct	115	.691	41.8	28.87	25	.615	37.8	23.27
Miscellaneous unskilled workers, indirect	90	.689	41.7	28.71	1	(1)	(1)	(1)
Packers and wrappers	44	.711	44.9	31.90	4	(1)	(1)	(1)
Punch-press operators, unskilled	34	.638	43.3	27.67	25	.599	38.8	23.23
Stock- and shipping-room laborers	39	.661	42.7	28.20	1	(1)	(1)	(1)
Tapers	12	(1)	(1)	(1)	156	.591	37.5	22.13
Winders, unskilled	51	.571	42.3	24.16	129	.542	39.3	21.32

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[10] Includes 15 working forewomen classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

TRANSFORMERS AND SWITCH GEAR

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
All workers	6,984	$0.883	41.3	$36.44	616	$0.597	37.7	$22.53
Skilled workers	1,953	1.096	42.0	46.07				
Assemblers, skilled	114	1.227	45.7	56.02				
Carpenters, skilled	48	1.009	40.3	40.68				
Drill-press operators, skilled	57	.948	41.1	38.98				
Electricians, maintenance	66	1.025	47.1	48.25				
Foremen, working	279	1.233	43.6	53.80				
Inspectors, skilled	41	1.132	42.7	48.30				
Lathe operators, engine, skilled	29	1.186	41.0	48.65				
Layout men, skilled	47	1.125	44.5	50.13				
Machinists	101	.999	42.0	41.89				
Mechanics, machine repair	81	1.014	42.2	42.79				
Milling-machine operators, skilled	27	1.247	42.8	53.37				
Millwrights and other maintenance workers	61	.918	46.6	42.78				
Miscellaneous machine operators, skilled	197	1.045	40.0	41.85				
Miscellaneous skilled workers, direct	88	1.068	40.7	43.45				
Miscellaneous skilled workers, indirect	52	1.036	44.0	45.59				
Molders, foundry	67	.955	38.2	36.43				
Pattern makers	33	1.241	41.2	51.14				
Pipefitters and plumbers	31	1.135	47.0	53.31				
Sheet-metal workers, skilled	53	1.034	40.7	42.12				
Testers, skilled	31	1.141	44.9	51.17				
Tool and die makers	139	1.127	41.5	46.83				
Welders and brazers	311	1.080	39.2	42.35				
Semiskilled workers	3,003	.870	41.3	35.93	91	.646	38.8	25.05
Apprentices	111	.489	40.7	19.91				
Assemblers, semiskilled, class 1	437	1.004	42.8	42.94	1	(1)	(1)	(1)
Assemblers, semiskilled, class 2	435	.830	41.7	34.59	34	.664	36.5	24.27
Checkers	35	.892	43.3	38.62	1	(1)	(1)	(1)
Clerks, factory	75	.784	41.6	32.65	15	(1)	(1)	(1)
Crane operators	98	.916	44.0	40.25				
Cutters, insulation	51	.914	38.9	35.60				
Drill-press operators, semiskilled	122	.844	40.3	34.05	1	(1)	(1)	(1)
Inspectors, semiskilled, class 1	31	.927	41.4	38.40				
Inspectors, semiskilled, class 2	39	.669	39.0	26.09	7	(1)	(1)	(1)
Milling-machine operators, semiskilled	55	.902	39.9	35.96				
Miscellaneous furnance and oven men, semiskilled	49	.907	41.5	37.61				
Miscellaneous machine operators, semiskilled	153	.860	41.0	35.23	5	(1)	(1)	(1)
Miscellaneous semiskilled workers, direct	107	.896	41.3	36.96	[11] 14	(1)	(1)	(1)
Miscellaneous semiskilled workers, indirect	134	.896	41.5	37.19				
Molders, plastic	31	1.039	37.1	38.53				
Painters, spray	74	.889	41.4	36.82	2	(1)	(1)	(1)
Platers	26	.906	39.3	35.63				
Punch-press operators, semiskilled	143	.913	39.0	35.55	4	(1)	(1)	(1)
Screw-machine operators, hand, semiskilled	98	.759	38.3	29.06				
Shearmen	42	.906	40.3	36.49				
Shipping and receiving clerks	25	.704	42.6	29.95				
Stock clerks	138	.735	43.5	31.95				
Storekeepers	30	.940	45.8	43.08				
Testers, semiskilled, class 1	72	.945	43.9	41.50				
Testers, semiskilled, class 2	55	.821	40.6	33.31	1	(1)	(1)	(1)
Truck drivers	33	.806	40.7	32.82				
Truck operators, electric and gas	58	.770	41.7	32.10				
Watchmen	41	.798	44.5	35.48				
Welders, spot	66	.951	33.6	31.96	2	(1)	(1)	(1)
Winders, semiskilled	139	.998	41.2	41.13	4	(1)	(1)	(1)
Unskilled workers	2,028	.690	40.5	27.92	525	.589	37.5	22.09
Assemblers, unskilled	192	.615	40.0	24.57	183	.591	38.7	22.84
Burrers and rough grinders	143	.640	39.5	25.26				
Cleaners, parts	45	.846	39.1	33.07				
Common laborers	132	.631	40.6	25.60				
Drill-press operators, unskilled	46	.542	40.8	22.15	6	(1)	(1)	(1)
Foundry laborers	61	.671	34.8	23.35				

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.
[11] Includes 9 working forewomen and 3 welders and brazers classed as skilled workers.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

TRANSFORMERS AND SWITCH GEAR—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Unskilled workers—Continued.								
Helpers, foundry and machine	144	$0.786	41.0	$32.22				
Helpers, maintenance	80	.704	45.1	31.77				
Janitors	102	.675	41.5	28.00	11	(1)	(1)	(1)
Learners	202	.553	38.5	21.29	54	$0.428	34.4	$14.72
Material handlers	94	.727	40.5	29.42				
Miscellaneous unskilled workers, direct	87	.780	40.1	31.23	51	.602	37.1	22.31
Miscellaneous unskilled workers, indirect	107	.773	41.4	31.99	1	(1)	(1)	(1)
Packers and wrappers	99	.850	44.0	37.40	21	(1)	(1)	(1)
Platers' helpers	45	.695	45.2	31.40				
Punch-press operators, unskilled	31	.727	36.5	26.53	21	(1)	(1)	(1)
Sandblasters	35	.890	43.5	38.71				
Stock- and shipping-room laborers	116	.686	41.7	28.62	1	(1)	(1)	(1)
Testers, unskilled	134	.716	40.2	28.78	11	(1)	(1)	(1)
Truckers, hand	44	.611	38.2	23.37				
Winders, unskilled	89	.643	39.1	25.15	165	.633	37.0	23.43

MISCELLANEOUS PRODUCTS

All workers	8,088	$0.789	41.0	$32.38	2,064	$0.588	39.6	$23.28
Skilled workers	1,897	1.057	41.3	43.68				
Assemblers, skilled	39	.994	40.1	39.88				
Electricians, maintenance	98	1.051	41.9	44.05				
Foremen, working	389	1.139	42.0	47.85				
Grinding-machine operators, skilled	51	1.009	41.2	41.56				
Inspectors, skilled	43	1.159	40.6	47.09				
Lathe operators	48	1.039	41.0	42.59				
Machinists	144	1.067	42.5	45.33				
Mechanics, machine repair	37	.899	41.6	37.37				
Milling-machine operators, skilled	47	1.086	40.3	43.78				
Millwrights and other maintenance workers	74	.915	42.6	38.94				
Miscellaneous machine operators, skilled	108	.971	40.0	38.84				
Miscellaneous skilled workers, direct	186	1.044	39.7	41.44				
Miscellaneous skilled workers, indirect	158	.991	41.1	40.71				
Pipefitters and plumbers	45	1.024	41.7	42.67				
Set-up men, machines, skilled	42	.959	40.8	39.14				
Sheet-metal workers, skilled	37	.870	41.1	35.79				
Tool and die makers	288	1.156	41.5	48.02				
Welders and brazers	63	.875	41.3	36.18				
Semiskilled workers	3,627	.774	41.0	31.74	407	.572	39.8	22.80
Apprentices	101	.703	40.7	28.62				
Assemblers, semiskilled	572	.790	40.6	32.09	8	(1)	(1)	(1)
Boxmakers	32	.696	40.0	27.85				
Buffers and polishers	57	.911	40.2	36.63				
Clerks, factory	53	.717	41.5	29.76	19	(1)	(1)	(1)
Drill-press operators, semiskilled	133	.693	41.5	28.77				
Grinding-machine operators, semiskilled	33	.746	43.3	32.27				
Inspectors, semiskilled	383	.777	40.9	31.79	26	.611	39.7	24.24
Lathe operators, turret, semiskilled	100	.756	41.9	31.66				
Milling-machine operators, semiskilled	110	.752	40.2	30.21				
Miscellaneous machine operators, semiskilled	129	.805	41.0	33.03				
Miscellaneous semiskilled workers, direct	933	.793	41.3	32.78	[12] 120	.615	40.6	24.94
Miscellaneous semiskilled workers, indirect	146	.805	41.5	33.43	61	.478	39.7	18.98
Oilers and motor tenders	37	.753	41.4	31.15				
Painters, maintenance	35	.887	39.1	34.70				
Punch-press operators, semiskilled	254	.793	39.5	31.33	1	(1)	(1)	(1)
Screw-machine operators, hand, semiskilled	73	.842	41.3	34.76				
Shearmen	34	.759	39.6	30.11				
Shipping and receiving clerks	25	.659	42.5	27.98	8	(1)	(1)	(1)
Stock clerks	133	.660	41.0	27.08	1	(1)	(1)	(1)
Storekeepers	47	.783	40.2	31.45	1	(1)	(1)	(1)
Testers, semiskilled	60	.737	42.1	31.00				

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.

[12] Includes 14 working forewomen, 5 welders and brazers, 1 inspector, and 3 miscellaneous direct workers classed as skilled.

TABLE 2.—*Average Hourly Earnings, Weekly Hours, and Weekly Earnings in Electrical Manufacturing, by Skill, Occupation, and Sex, August 1937*—Continued

MISCELLANEOUS PRODUCTS—Continued

Skill and occupation	Males				Females			
	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings	Number of workers	Average hourly earnings	Average weekly hours	Average weekly earnings
Semiskilled workers—Continued.								
Tool-crib attendants	37	$0.722	40.5	$29.27	1	(1)	(1)	(1)
Truck operators, electric and gas	26	.769	41.2	31.69				
Watchmen	58	.685	43.6	29.85				
Welders, spot	26	.818	40.7	33.27	161	$0.555	39.1	$21.70
Unskilled workers	2,564	.610	40.9	24.93	1,657	.592	39.6	23.41
Assemblers, unskilled	888	.604	39.9	24.11	868	.556	39.6	22.01
Burrers and rough grinders	90	.603	42.3	25.50	2	(1)	(1)	(1)
Common laborers	115	.593	41.0	24.30				
Drill-press operators, unskilled	132	.631	39.0	24.58	20	(1)	(1)	(1)
Helpers, foundry and machine	39	.643	39.9	25.68				
Helpers, maintenance	150	.638	41.0	26.16				
Inspectors, unskilled	44	.569	39.9	22.68	131	.580	39.5	22.94
Janitors	113	.590	41.8	24.64	27	.528	38.5	20.30
Lathe operators, engine, unskilled	25	.642	39.4	25.29	1	(1)	(1)	(1)
Learners	111	.504	41.8	21.05	7	(1)	(1)	(1)
Material handlers	68	.590	42.6	25.10				
Miscellaneous unskilled workers, direct	447	.649	41.9	27.15	535	.646	39.6	25.61
Miscellaneous unskilled workers, indirect	18	.705	41.3	29.09	3	(1)	(1)	(1)
Packers and wrappers	88	.640	43.8	27.98	12	(1)	(1)	(1)
Punch-press operators, unskilled	38	.610	39.2	23.89	51	(1)	(1)	(1)
Salvage workers, unskilled	33	.644	40.9	26.36				
Stock- and shipping-room laborers	79	.596	41.5	24.76				
Truckers, hand	86	.553	40.7	22.48				

[1] Not a sufficient coverage, in either plants or workers, to permit computation of an average.

SALARIES OF SCHOOL EMPLOYEES, 1938–39

AVERAGE salaries for most types of school positions continue to rise to predepression levels. In the school year, 1938–39, as compared with 1936–37, the lag was greatest in the smaller towns and cities, yet even in these communities the general situation showed very considerable improvement as compared with that of 2 years ago. Table 1 indicates that the median salaries of all types of school employees in cities of over 100,000 population decreased from 1930–31 to 1932–33 and were reduced still further in 1934–35. The trend was reversed in 1936–37 and 1938–39. In almost every type of position in these cities the 1938–39 salaries exceed those of 1936–37. Among the most substantial increases in the median salaries paid in city school systems in this group of larger cities, according to the ninth biennial survey of the Research Division of the National Education Association,[1] were 54.02 percent for directors, assistant directors, or supervisors of health; 20.02 percent for directors, assistant directors, or supervisors of vocational education; and 19.30 percent for teaching principals in elementary schools.

[1] National Education Association of the United States. Salaries of School Employees, 1938–39. Washington, March 1939. (Research Bulletin Vol. XVII, No. 2.)

TABLE 1.—*Trends in Salaries of School Employees in Cities of Over 100,000 Population, 1930–31 to 1938–39*

Occupation	Median salary paid in—					Percent of change		
	1930–31	1932–33	1934–35	1936–37	1938–39	1931–39	1935–39	1937–39
Classroom teachers								
Kindergarten	$2,077	$1,909	$1,926	$2,045	$2,208	+6.31	+14.64	+7.97
Elementary school	2,118	1,947	1,922	2,027	2,217	+4.67	+15.35	+9.37
Atypical classes	2,372	2,100	1,996	2,182	2,393	+.89	+19.89	+9.67
Junior high school	2,348	2,204	2,078	2,303	2,450	+4.34	+17.90	+6.38
High school	2,731	2,479	2,436	2,551	2,672	−2.16	+9.69	+4.74
Part-time or continuation school	2,695	2,793	2,693	2,886	2,198	−18.44	−18.38	−23.84
Heads of departments in high school	3,436	3,008	2,913	3,288	3,512	+2.21	+20.56	+6.81
Deans								
Junior high school	3,092	2,730	2,539	2,888	3,107	+.49	+22.37	+7.58
High school	2,942	2,667	2,268	2,464	2,669	−9.28	+17.68	+8.32
Principals								
Elementary school:								
Assistant principals	4,280	4,614	4,042	4,245	4,647	+8.57	+14.97	+9.47
Teaching principals	2,436	2,184	2,135	2,207	2,633	+8.09	+23.33	+19.30
Supervising principals	3,519	3,102	3,016	3,225	3,339	−5.12	+10.71	+3.53
Junior high school:								
Assistant principals	3,496	2,899	2,850	3,106	3,318	−5.09	+16.42	+6.83
Principals	4,500	3,961	3,718	4,064	4,359	−3.13	+17.24	+7.26
High school:								
Assistant principals	5,544	3,647	3,453	3,569	3,992	−27.99	+15.61	+11.85
Principals	5,100	4,468	4,252	4,473	4,758	−6.71	+11.90	+6.37
Part-time or continuation school:								
Principals	4,111	3,700	4,125	5,125	3,900	−5.13	−5.45	−23.90
Administrative and supervisory staff								
Superintendents of schools	10,000	8,267	7,288	7,825	8,286	−17.14	+13.69	+5.89
Associate, assistant, or deputy superintendents	6,527	5,672	5,578	5,645	5,971	−8.52	+7.05	+5.78
Business managers	5,361	4,500	4,186	4,543	4,571	−14.74	+9.20	+.62
Directors, assistant directors or supervisors of—								
Research tests, and measurements	3,400	3,010	2,925	3,020	3,417	+.50	+16.82	+13.15
Vocational education	3,550	3,380	3,075	3,187	3,825	+7.75	+24.39	+20.02
Physical education	3,100	3,123	2,909	2,989	3,152	+1.68	+8.35	+5.45
Health	3,167	2,500	2,800	2,175	3,350	+5.78	+19.64	+54.02
Evening schools	-------	3,325	3,000	2,700	2,875	-------	−4.17	+6.48
Americanization classes	3,240	3,033	2,750	2,950	2,950	−8.95	+7.25	0.00
Art	2,867	2,744	2,687	2,860	3,000	+4.64	+11.65	+4.90
Music	2,909	2,825	2,569	2,813	2,896	−.45	+12.73	+2.95
Penmanship	2,933	2,789	2,727	2,907	2,889	−1.50	+5.94	−.62
Manual training or industrial arts	3,450	3,308	3,278	3,136	3,137	−9.97	−4.30	+.03
Home economics	3,219	2,967	2,818	3,040	3,240	+.65	+14.98	+6.58
Visual education	-------	-------	-------	-------	3,167	-------	-------	-------
Other school employees								
Secretaries to superintendents of schools	2,329	1,978	1,779	1,918	2,075	−10.90	+16.64	+8.19
Secretaries of boards of education	4,450	3,700	3,333	3,767	3,825	−14.04	+14.76	+1.54
Clerks in principals' offices	1,281	1,133	1,147	1,218	1,299	+1.41	+13.25	+6.65
Clerks in other administrative and supervisory offices	1,581	1,442	1,450	1,528	1,590	+.57	+9.66	+4.06
Superintendents of buildings and grounds	4,267	3,400	3,109	3,156	3,850	−9.77	+23.83	+21.99
Head janitors	2,500	2,000	1,564	2,657	2,063	−17.48	+31.91	−22.36
Janitors	1,541	1,265	1,211	1,297	1,429	−7.27	+18.00	+10.18
Head nurses	2,138	2,029	1,875	1,943	2,000	−6.45	+6.75	+2.93
Nurses	1,715	1,611	1,512	1,706	1,739	+1.40	+15.01	+1.93
Chief attendance officers	3,125	2,783	2,530	2,767	2,788	−10.78	+10.20	+.76
Attendance officers	2,078	1,971	1,888	2,063	2,219	+6.79	+17.53	+7.56

From table 2 comparisons may be made of median and mean salaries of kindergarten and elementary-school and junior- and senior-high-school teachers in 1938–39 in cities of over 100,000 population. Marked differences are reported in the remuneration paid in the various communities, the median salaries of elementary school teachers ranging from $1,280 in Jacksonville, Fla., to $3,336 in New

York City; and of senior-high-school teachers, from $1,302 in Jacksonville to $4,455 in New York City.

TABLE 2.—*Median Salaries of Teachers in Cities of Over 100,000 Population, 1938–39*

City	Kindergarten	Elementary school	Junior high school	Senior high school	City	Kindergarten	Elementary school	Junior high school	Senior high school
Birmingham, Ala.	-------	$1,494	-------	$1,793	Elizabeth, N. J.	$2,100	$1,968	$2,167	$2,600
Long Beach, Calif.	$2,401	2,401	$2,910	2,910	Jersey City, N. J.	1,550	2,162	-------	3,355
Los Angeles, Calif.	2,309	2,329	2,813	2,907	Newark, N. J.	3,068	2,729	2,172	3,240
Oakland, Calif.	2,448	2,458	2,819	2,833	Paterson, N. J.	3,000	2,528	-------	3,050
San Diego, Calif.	2,163	2,168	2,516	2,807	Trenton, N. J.	2,050	2,042	2,244	3,100
San Francisco, Calif.	2,025	2,527	2,389	3,204	Albany, N. Y.	1,963	2,017	2,369	2,404
Denver, Colo.	2,550	2,620	2,825	2,843	Buffalo, N. Y.	2,200	2,200	-------	2,619
Bridgeport, Conn.	1,725	2,030	2,200	2,356	New York, N. Y.	3,326	3,336	3,830	4,455
Hartford, Conn.	2,217	2,269	2,300	3,256	Rochester, N. Y.	2,205	2,161	-------	2,687
New Haven, Conn.	1,824	1,855	2,100	2,461	Syracuse, N. Y.	2,000	2,048	2,400	2,400
Wilmington, Del.	1,600	2,100	1,856	2,050	Utica, N. Y.	2,000	2,054	-------	2,440
Washington, D. C.	2,246	2,233	2,451	2,841	Yonkers, N. Y.	2,890	3,082	3,619	3,876
Jacksonville, Fla.	-------	1,280	1,364	1,302	Akron, Ohio	-------	1,900	-------	1,976
Miami, Fla.	-------	1,539	1,616	1,612	Canton, Ohio	-------	1,715	-------	2,209
Atlanta, Ga.	1,767	1,925	2,402	2,457	Cincinnati, Ohio	2,183	2,412	2,528	2,823
Peoria, Ill.	1,700	1,723	1,721	2,065	Cleveland, Ohio	2,368	2,480	2,738	3,191
Evansville, Ind.	1,600	1,848	-------	2,221	Columbus, Ohio	-------	1,800	2,331	2,337
Fort Wayne, Ind.	1,820	1,811	-------	2,463	Dayton, Ohio	-------	1,817	2,042	2,439
Gary, Ind.	1,693	1,672	-------	2,140	Toledo, Ohio	2,125	2,103	2,271	2,459
Indianapolis, Ind.	-------	1,895	-------	2,185	Youngstown, Ohio	-------	1,907	2,429	2,943
South Bend, Ind.	1,757	1,769	1,863	2,320	Oklahoma City, Okla.	1,440	1,438	1,398	1,925
Des Moines, Iowa	1,844	1,744	1,807	1,987	Tulsa, Okla.	1,607	1,812	1,824	1,861
Kansas City, Kans.	1,417	1,715	1,905	2,100	Portland, Oreg.	1,600	1,966	-------	2,124
Wichita, Kans.	1,457	1,762	1,837	1,857	Erie, Pa.	1,881	1,882	2,150	2,311
Louisville, Ky.	1,671	1,603	1,810	2,267	Philadelphia, Pa.	-------	2,200	2,800	3,251
New Orleans, La.	1,617	1,649	-------	2,230	Pittsburgh, Pa.	2,242	2,237	2,832	3,271
Baltimore, Md.	1,908	1,814	2,057	2,737	Reading, Pa.	2,013	2,054	2,303	2,539
Boston, Mass.	1,959	2,339	2,443	3,055	Scranton, Pa.	1,867	1,937	2,229	2,175
Fall River, Mass.	1,405	1,452	1,745	1,904	Providence, R. I.	2,202	2,040	2,402	2,661
Lowell, Mass.	1,446	1,555	1,854	1,971	Knoxville, Tenn.	-------	1,409	1,533	1,675
Lynn, Mass.	-------	1,925	2,150	2,367	Nashville, Tenn.	-------	1,273	1,352	1,746
New Bedford, Mass.	1,543	1,543	1,908	2,232	Dallas, Tex.	-------	1,744	1,858	2,314
Somerville, Mass.	1,775	2,010	2,102	2,156	El Paso, Tex.	1,300	1,365	-------	1,529
Springfield, Mass.	2,069	2,061	2,399	2,972	Fort Worth, Tex.	-------	1,612	1,473	1,900
Worcester, Mass.	2,035	2,050	2,516	2,768	Houston, Tex.	1,613	1,869	1,825	2,163
Detroit, Mich.	2,400	2,412	2,868	2,870	San Antonio, Tex.	-------	1,552	1,636	1,678
Flint, Mich.	1,288	1,449	1,596	1,683	Salt Lake City, Utah	1,530	1,728	-------	1,989
Grand Rapids, Mich.	1,638	1,657	-------	2,189	Norfolk, Va.	-------	1,371	1,548	1,500
Duluth, Minn.	1,629	1,696	1,957	2,194	Richmond, Va.	-------	1,800	2,103	2,224
Minneapolis, Minn.	2,102	2,139	2,148	2,501	Seattle, Wash.	-------	2,335	2,647	2,676
St. Paul, Minn.	1,655	1,652	2,222	2,237	Spokane, Wash.	-------	1,980	2,117	2,209
Kansas City, Mo.	1,689	1,695	1,941	2,199	Tacoma, Wash.	-------	1,864	1,988	2,005
St. Louis, Mo.	2,700	2,700	1,600	3,691	Milwaukee, Wis.	2,437	2,450	2,424	2,655
Omaha, Nebr.	1,523	1,519	-------	1,800					
Camden, N. J.	1,805	1,919	2,233	2,485					

Salaries of Rural Teachers

Annual median or mean salaries paid to teachers in rural communities [2] in 40 States are also reported by the National Education Association in the same publication from which the preceding tables are taken. The survey upon which the findings are based, however, was much less comprehensive than that of the city school systems.

[2] The term "rural community" as here used is not in every case defined in strict accordance with the census classification, namely, "with a population of less than 2,500."

In 1937–38 the mean annual salary of Negro rural teachers was as low as $443.90 in Florida, and the highest rural mean annual salary reported for the same year—$1,679—was for Negro high-school teachers in Delaware in towns having less than 2,000 population.

TABLE 3.—*Annual Salaries Paid to Rural Teachers in 40 States* [1]

State, year, and group of teachers	Annual salary
Alabama (1934–35):	
Elementary teachers:	*Mean*
White	$531.00
Negro	225.00
High-school teachers:	
White	823.00
Negro	443.00
All teachers:	
White	621.00
Negro	249.00
Arkansas (1935–36):	
Elementary teachers:	
Men, white	422.00
Women, white	429.00
Men, Negro	325.00
Women, Negro	240.00
High-school teachers:	
Men, white	694.00
Women, white	533.00
Men, Negro	666.00
Women, Negro	360.00
Connecticut (1936–37):	
Elementary teachers	1,096.57
Men	1,108.50
Women	1,096.34
Junior-high-school teachers	1,550.00
Women	1,550.00
High-school teachers	1,360.24
Men	1,446.48
Women	1,319.75
Delaware (1937–38):	
Elementary teachers:	
White	1,277.00
Negro	1,224.00
High-school teachers:	
White	1,493.00
Negro	1,679.00
All teachers:	
White	1,347.00
Negro	1,238.00
Florida (1937–38):	
Teachers:	
White	[2] 862.01
Negro	[2] 443.90
Georgia (1935–36):	
Elementary teachers:	
White	605.19
Negro	246.03
High-school teachers:	
White	1,008.74
Negro	605.95
	Median
Indiana (1935–36): All rural teachers	912.69
Iowa (1936–37): All rural teachers	516.00
Kansas (1936–37):	
1-teacher elementary schools:	*Mean*
Men	492.00
Women	469.00
2-or-more-teacher schools (elementary only):	
Men	699.00
Women	655.00
Kansas (1936–37)—Continued.	
2-or-more-teacher schools (both elementary and high):	*Mean*
Men (elementary)	$734.00
Women (elementary)	700.00
Men (junior high school)	970.00
Women (junior high school)	804.00
Men (high school)	1,081.00
Women (high school)	885.00
Rural high schools:	
Men	1,095.00
Women	919.00
Kentucky (1937–38):	
Elementary teachers:	*Median*
Men, white	558.00
Women, white	587.00
Men, Negro	627.00
Women, Negro	622.00
High-school teachers:	
Men, white	1,011.00
Women, white	848.00
Men, Negro	929.00
Women, Negro	810.00
Louisiana (1936–37):	
Elementary teachers:	
White	854.00
Negro	322.00
High-school teachers:	
White	1,273.00
Negro	607.00
All rural school teachers:	
White	990.00
Negro	340.00
Maine (1937–38): All teachers	530.00
Maryland (1936–37):	*Mean*
Elementary teachers, white	1,248.00
1-teacher schools	1,098.00
2-teacher schools	1,170.00
3-or-more-teacher schools	1,282.00
Elementary teachers, Negro	646.00
High-school teachers:	
White	1,474.00
Negro	812.00
Massachusetts (1938): Elementary and junior-high-school teachers [3]	1,145.00
Michigan (1936–37):	
Communities, 500 to 1,000	1,069.83
Men	1,269.14
Women	983.33
Communities, 1,000 to 2,500	1,111.71
Men	1,217.80
Women	1,068.24
Minnesota (1937–38):	
Elementary teachers:	*Median*
Ungraded	608.00
Graded	855.00
High-school teachers	1,049.00
Mississippi (1936–37):	
All teachers:	*Mean*
White	458.00
Negro	150.00

[1] The United States census classifies as rural, communities with a population of less than 2,500. The term "rural" as used in this table is not in every instance defined in strict accordance with the census classification.

[2] Includes principals and supervisors.

TABLE 3.—*Annual Salaries Paid to Rural Teachers in 40 States*—Continued

State, year, and group of teachers	Annual salary
Missouri (1938–39):	*Mean*
Men, white	$648.00
Women, white	614.00
Men, Negro	520.00
Women, Negro	500.00
Montana (1937–38):	
1-teacher elementary schools	680.00
2-teacher elementary schools	800.00
3-or-more-teacher elementary and high schools	900.00
Nebraska (1937–38):	
All teachers:	
Men	513.61
Women	493.12
Nevada (1938–39): All teachers	1,131.00
	Median
New Hampshire (1937–38): All teachers	871.00
New Jersey (1935–36):	
1-room rural schools:	*Mean*
Men	1,153.00
Women	997.00
2-room rural schools:	
Men	1,106.00
Women	1,093.00
New Mexico (1936–37):	
White teachers:	
Men	790.00
Women	785.00
New York (1936–37): All teachers	1,347.18
North Carolina (1936–37):	
Elementary teachers	684.58
White	761.98
Negro	519.73
High-school teachers	774.05
White	798.91
Negro	616.02
All teachers	700.46
White	769.92
Negro	527.83
North Dakota (1935–36):	
1-room rural schools	454.53
Graded and consolidated schools in open country	611.25
Graded and consolidated schools in towns	800.22
Ohio (1936): All teachers	1,046.68
Pennsylvania (1937–38):	*Median*
Elementary teachers	907.00
High-school teachers	1,255.00
All teachers	977.00
Rhode Island (1936–37):	*Mean*
Elementary teachers	1,037.23
High-school teachers	1,225.38
South Dakota (1937–38):	
All man teachers	595.00
All woman teachers	532.00
Tennessee (1937–38):	
All elementary teachers	613.52
Men, white	646.40
Women, white	620.16
Men, Negro	585.76
Women, Negro	511.28
All high-school teachers	911.12
Men, white	1,036.96
Women, white	840.00
Men, Negro	691.92
Women, Negro	540.40

State, year, and group of teachers	Annual salary
Texas (1936–37):	*Mean*
Elementary teachers, white	$885.00
Men	821.00
Women	893.00
Elementary teachers, Negro	551.00
Men	564.00
Women	459.00
Junior-high-school teachers, white	1,384.00
Men	1,376.00
Women	1,386.00
Junior-high-school teachers, Negro	1,096.00
Men	1,057.00
Women	1,114.00
High-school teachers, white	1,196.00
Men	1,226.00
Women	1,172.00
High-school teachers, Negro	794.00
Men	824.00
Women	760.00
Utah (1937–38):	
Elementary teachers:	
Men	1,053.15
Women	941.58
Junior high-school-teachers:	
Men	1,300.28
Women	1,121.44
High-school teachers:	
Men	1,487.96
Women	1,176.18
Vermont (1938–39):	
All elementary teachers	665.91
Men	679.81
Women	665.25
Virginia (1936–37):	
Elementary teachers	557.00
White	617.00
Negro	394.00
High-school teachers	815.00
White	846.00
Negro	554.00
All teachers	613.00
White	676.00
Negro	405.00
Washington (1937–38):	
All teachers:	
Men	1,080.17
Women	1,091.19
West Virginia (1936–37): All teachers	1,027.00
Wisconsin (1936–37):	
1-teacher schools:	*Median*
Men	738.00
Women	711.00
2-or-more-teacher schools (elementary only):	
Men	963.00
Women	810.00
County high schools, including elementary grades:	
Men	981.00
Women	900.00
High-school grades:	
Men	1,323.00
Women	1,071.00
	Mean
Wyoming (1935–36): All teachers	630.91

WAGES IN CANADA, 1938

THE upward trend in wages in Canada which began to be apparent in logging, sawmilling, and common factory labor in 1934, and spread to all industrial groups in 1935, continued through 1936, 1937, and 1938.[1] The general average weighted wage index [2] in 1938, based on 9 important industrial groups, was 199.4 (1913=100), or 4 percent above that of 1937, as indicated in table 1. The increase for logging and sawmilling from 1937 to 1938 was 4.8 percent, and for steam railways, slightly over 4 percent. In the building trades the increase was only about 2.5 percent.

TABLE 1.—*Indexes of Wage Rates of Various Classes of Labor in Canada, 1929, 1933 1936, 1937, and 1938*

[1913=100]

Industry	1938	1937	1936	1933	1929
Building trades [1]	169.4	165.3	160.8	158.0	197.5
Metal trades [2]	189.3	187.4	170.1	169.2	184.6
Printing trades [3]	190.7	187.8	185.2	184.3	202.3
Electric railways [4]	193.7	190.5	185.5	182.7	198.6
Steam railways [5]	204.3	196.1	183.9	179.7	204.3
Coal mining [6]	174.4	166.8	165.9	161.9	168.9
Average, unweighted [7]	187.0	182.3	175.2	172.6	192.7
Average, weighted [8]	187.8	182.9	172.9	170.2	195.0
Common factory labor	199.7	195.5	179.7	168.1	187.8
Miscellaneous factory trades [9]	210.3	203.7	188.8	175.7	202.1
Logging and sawmilling	197.2	188.1	165.9	121.7	185.6
General average, weighted [8]	199.4	191.7	178.6	168.3	196.0

[1] 9 trades, 14 cities in 1929; after 1930, 31 to 42 cities.
[2] 4 trades.
[3] 6 trades.
[4] 5 classes.
[5] 23 classes.
[6] 12 classes.
[7] Average for above 6 industry groups.
[8] Weighted according to average number of workers in each group in 1921 and in 1931.
[9] The number of samples (and industries) increased from time to time; machine operators, helpers, etc., also included.

The wage rates and working hours in specified occupations in 3 cities—Ottawa, Toronto, and Vancouver—in 1937 and 1938, are shown in table 2. Among the increases reported for 1938 as compared with the preceding year are those for carpenters—from 80 to 85 cents in Ottawa, from 85 to 95 cents in Toronto, and from 62½–90 cents to 75–90 cents in Vancouver. For electrical workers in Ottawa the rates were 10 cents higher in 1938, as were also the rates of plumbers in Ottawa and Toronto and of sheet-metal workers in the latter city. The weekly remuneration of compositors (machine and hand, newspapers) in Toronto rose from $42.50 in 1937 to $44.00 in 1938; of pressmen (newspapers) in Vancouver from $43.20 to $47.70; and of bookbinders in the same city from $38–$45 to $40–$45.

[1] Canada, Department of Labor. Wages and Hours of Labor Report No. 22: Wages and Hours of Labor in Canada, 1929, 1937, and 1938. Ottawa, 1939.

[8] Weighted according to average number of workers in each group in 1921 and in 1931.

TABLE 2.—*Rates of Wages and Hours of Labor in Various Occupations in Specified Canadian Cities, 1937 and 1938*

BUILDING TRADES

Occupation	Ottawa		Toronto		Vancouver	
	Wage rates	Hours per week	Wage rates	Hours per week	Wage rates	Hours per week
Bricklayers and masons:	*Per hour*		*Per hour*		*Per hour*	
1937	$0.85 -$0.95	44	$0.90	40	$1.10	40
1938	.90	44	1.05	40	1.10	40
Carpenters:						
1937	.80	44	.85	40–44	.62½- .90	40–44
1938	.85	44	.95	40	.75 - .90	40–44
Electrical workers:						
1937	.70	40	1.00	40	.75 - 1.00	40–44
1938	.80	40	1.00	40	.75 - 1.00	40–44
Painters:						
1937	.65	44	.75	40	.62½- .80	40–44
1938	.65	44	.75	40	.62½- .80	40–44
Plasterers:						
1937	.80	44	.90	40	1.00	40
1938	.85	44	.90	40	1.00	40
Plumbers:						
1937	.85	40	.90	40	1.00	40–44
1938	.95	40	1.00	40	1.00	40–44
Sheet-metal workers:						
1937	.82	40–44	.87½	40	1.00	40–44
1938	.85	40–44	.97½	40	1.00	40–44
Stonecutters:						
1937	.80	44	.87½	40	1.00	40
1938	.80	44	.95	40	1.00	40
Laborers:						
1937	.40	44–50	.35 - .50	40–50	.45 - .50	40–48
1938	.40 - .50	40–50	.35 - .50	40–60	.45 - .50	40–48

STREET RAILWAYS [1]

Conductors and motormen: [2]						
1937:	*Per hour*		*Per hour*		*Per hour*	
1-man cars	$0.54	49½	$0.65	44–48	$0.69	48
2-man cars	----------	-------	.60	44–48	.63	48
1938:						
1-man cars	.54	49½	.65	44–48	.69	48
2-man cars	----------	-------	.60	44–48	.63	48
Linemen: [3]						
1937	.51 - .56	48	.72 - .78	44	.68½- .97	40–48
1938	.51 - .56	48	.72 - .78	44	.68½- .97	40
Shop and barn men: [4]						
1937	.35 - .59	48	.54 - .81	44–48	.52 - .75	44–48
1938	.35 - .59	48	.54 - .81	44–48	.52 - .75	44–48
Electricians: [5]						
1937	.45 - .61	48	.57½- .79	44–48	.70 - .75	44
1938	.45 - .61	48	.60 - .79	44–48	.70 - .75	44
Trackmen and laborers:						
1937	.38½- .44½	48	.45 - .55	48	.45 - .54	44
1938	.38½- .44½	48	.45 - .55	48	.45 - .54	44

PRINTING TRADES

Compositors, machine and hand, newspapers:	*Per week*		*Per week*		*Per week*	
1937	$44.00	46½	$42.50	40	$43.20	45
1938	41.80	45	44.00	40	39.75–47.70	37½–45
Compositors, machine and hand, job:						
1937	30.00–38.00	45–48	33.00–40.00	40–48	40.50	44–48
1938	30.00–38.00	45–48	33.00–40.00	40–44	40.50	44–48
Pressmen, newspapers:						
1937	43.00	48	48.50	48	43.20	48
1938	40.85	48	44.00–50.30	40–48	47.70	48
Pressmen, job:						
1937	30.00–38.00	45–48	33.00–40.00	40–48	40.50	44–48
1938	30.00–38.00	45–48	33.00–40.00	40–48	40.50	44–48
Bookbinders:						
1937	30.00–36.00	45–48	33.00–40.00	44–48	38.00–45.00	44–48
1938	30.00–36.00	45–48	33.00–44.00	40–48	40.00–45.00	44–48
Bindery girls:						
1937	10.50–14.50	45–48	12.00–18.00	44–48	14.00–20.25	44–48
1938	11.50–14.50	45–48	13.20–18.00	40–48	14.00–20.25	44–48

[1] Where a range appears, figures represent predominant rates.
[2] Maximum rates based on length of service; in most cities bus drivers, on lines operated in connection with street railways, receive the same maximum rates of wages as 1-man car operators.
[3] Including troublemen and groundmen.
[4] Including shedmen, pitmen, cleaners, blacksmiths, carpenters, painters, etc.
[5] Including armature winders, wiremen, etc.

Agricultural Wages

In the summer season of 1938, for the Dominion as a whole, the estimated cash wage per month of male farm workers was $24—only $1 more than the 1937 estimate. The value of board in 1938 for these workers was estimated at $17, the same amount as for the previous year. The estimated annual cash wages, together with the value of board for male farm workers, in 1938, averaged $405, which was $5 above the 1937 average, while the yearly wages and board of female farm workers averaged $275—or $3 more than in 1937. Table 3 gives the average wages of both male and female farm workers in the various Canadian Provinces.[3] It will be noted that the remuneration of these workers is still far below that of 1929.

TABLE 3.—*Average Monthly and Yearly Wages of Farm Workers in Canada, 1929, 1933, 1936, 1937, and 1938* [1]

Province and year	Per month, summer season						Per year					
	Males			Females			Males			Females		
	Cash wage	Value of board	Total	Cash wage	Value of board	Total	Cash wage	Value of board	Total	Cash wage	Value of board	Total
Canada:												
1929	$40	$23	$63	$23	$20	$43	$373	$254	$627	$242	$223	$465
1933	17	15	32	10	12	22	161	161	322	112	134	246
1936	21	16	37	11	13	24	206	168	374	126	135	261
1937	23	17	40	12	13	25	224	176	400	134	138	272
1938	24	17	41	12	13	25	230	175	405	135	140	275
Prince Edward Island:												
1929	34	18	52	19	13	32	327	207	534	196	159	355
1933	18	12	30	11	10	21	178	141	319	116	121	237
1936	18	13	31	11	11	22	190	161	351	126	136	262
1937	21	15	36	11	13	24	206	168	374	125	127	252
1938	20	13	33	10	11	21	205	159	364	130	130	260
Nova Scotia:												
1929	38	19	57	19	15	34	383	222	605	212	179	391
1933	20	14	34	12	11	23	208	157	365	129	119	248
1936	22	15	37	12	11	23	245	170	415	136	124	260
1937	25	15	40	12	11	23	262	173	435	145	127	272
1938	25	16	41	11	12	23	269	170	439	145	132	277
New Brunswick:												
1929	40	20	60	18	15	33	375	214	589	198	169	367
1933	18	13	31	10	10	20	185	151	336	107	120	227
1936	25	15	40	11	11	22	257	141	398	117	101	218
1937	28	16	44	12	12	24	295	147	442	133	115	248
1938	26	15	41	12	11	23	280	152	432	128	119	247
Quebec:												
1929	41	20	61	19	14	33	369	208	577	191	151	342
1933	17	11	28	9	9	18	152	113	265	94	93	187
1936	19	13	32	10	10	20	196	136	332	106	100	206
1937	25	15	40	12	11	23	226	150	376	121	111	232
1938	24	14	38	11	11	22	247	151	398	122	113	235
Ontario:												
1929	35	22	57	22	19	41	341	254	595	242	212	454
1933	17	15	32	12	13	25	159	166	325	123	141	264
1936	21	16	37	13	14	27	211	177	388	147	148	295
1937	25	18	43	14	15	29	235	186	421	158	154	312
1938	24	18	42	15	15	30	228	183	411	152	151	303
Manitoba:												
1929	38	23	61	21	19	40	352	256	608	222	216	438
1933	15	14	29	8	12	20	143	164	307	89	140	229
1936	19	15	34	9	13	22	178	158	336	103	132	235
1937	21	16	37	10	13	23	202	165	367	113	136	249
1938	23	16	39	11	13	24	207	166	373	116	136	252

[1] Estimated by crop correspondents of the Dominion Bureau of Statistics.

[3] Canadian Labor Gazette, Ottawa, May 1939.

TABLE 3.—*Average Monthly and Yearly Wages of Farm Workers in Canada, 1929, 1933, 1936, 1937, and 1938—Continued*

Province and year	Per month, summer season						Per year					
	Males			Females			Males			Females		
	Cash wage	Value of board	Total	Cash wage	Value of board	Total	Cash wage	Value of board	Total	Cash wage	Value of board	Total
Saskatchewan:												
1929	$44	$25	$69	$24	$22	$46	$398	$287	$685	$256	$240	$496
1933	16	15	31	8	12	20	144	161	305	85	137	222
1936	19	16	35	9	13	22	188	158	346	105	133	238
1937	19	16	35	10	13	23	184	160	344	106	127	233
1938	22	15	37	10	13	23	203	160	363	113	134	247
Alberta:												
1929	43	25	68	25	21	46	404	274	678	253	232	485
1933	19	15	34	10	13	23	170	174	344	109	152	261
1936	22	16	38	11	14	25	206	172	378	125	146	271
1937	23	17	40	12	15	27	221	180	401	131	151	282
1938	25	18	43	12	15	27	237	181	418	137	152	289
British Columbia:												
1929	49	27	76	28	23	51	482	310	792	291	271	562
1933	23	19	42	14	15	29	234	212	446	152	180	332
1936	25	21	46	15	17	32	265	229	494	166	192	358
1937	28	21	49	17	18	35	279	234	513	170	193	363
1938	28	22	50	16	19	35	284	238	522	170	195	365

WAGES AND HOURS OF SEAMEN, AMSTERDAM, 1939

THE Dutch Transport Workers Union and the shipowners recently concluded a collective agreement providing for improved labor conditions for seamen employed by the regular lines sailing from Amsterdam.[1]

Wage rates.—Minimum rates are specified for catering personnel, as well as for quartermasters and boatswain's mates. The following are the new minimum monthly rates for seamen on liners sailing from Amsterdam, including ships of the Rotterdamsche Lloyd.

	Gulden [1]
Boatswain	102. 00
Carpenter	[2] 102. 00
Boatswain's mate	98. 00
Quartermaster	95. 00
Able seaman	93. 00
Ordinary seaman ("light deck hand")	44. 50
Boy	22. 50
Donkeyman	102. 00
Greaser	102. 00
Fireman	93. 00

[1] Average exchange rate of guilder in March 1939, 53 cents.
[2] Plus 5 gulden per month for tools.

Hours of labor.—By the agreement, the working hours of deck hands, which were lowered in 1937 from 84 to 72 per week, were further reduced

[1] International Transportworkers' Federation and International Mercantile Marine Officers' Association Joint Press Report, Amsterdam, May 22, 1939.

to 68 per week. Day men will in future work 9 hours a day instead of 10. Deck hands who, on days of arrival and departure, formerly worked 10 hours a day, are hereafter prohibited from working more than 9 hours, unless all overtime is paid for.

Greasers and donkeymen have hitherto been obliged to work when required, an additional 6 hours a week, but under the new agreement this can be required only for emergency work of an urgent nature.

Catering personnel will be entitled to 1 day's leave, with pay, at the end of each voyage, for every 10 full hours of overtime worked. Periods of overtime amounting to less than half an hour are to count as half an hour. For every day's work between voyages, the catering staff is to be paid one twenty-sixth of the monthly wages, plus food allowance, subject to a minimum of 4 gulden a day.

Other provisions.—Sick-pay arrangements for all the personnel will be considerably improved. The law requires payment of 80 percent of wages, but under the new agreement the amount will be 80 percent of 1½ times the wages, subject to a maximum of 100 gulden a month.

Of late years shipowners are reported to have adopted the practice of signing on able seamen 25 to 30 years of age as "light deck hands" (about the equivalent of "ordinary seamen"). Under the new agreement, seamen with more than 3 years' sea service and older than 23 years of age may not be signed at a lower rating than able seaman.

Labor Turn-Over

LABOR TURN-OVER IN MANUFACTURING, APRIL 1939

THE NUMBER of separations reported in manufacturing establishments in April was approximately 25 percent lower than in April 1938, according to the Bureau of Labor Statistics' monthly survey of labor turn-over in manufacturing industries. No change was shown in the discharge rate, but a marked rise was shown in the quit rate. The hiring rate was slightly higher than a year ago.

As compared with the preceding month, a moderate rise was shown in the number of lay-offs and total separations. Quit and discharge rates declined. The same was true of accessions to the labor force.

In the 28 industries for which separate rates are published (see table 2) only moderate changes were shown in the quit and discharge rates. Seasonal variations were reflected in the higher lay-off rates in the men's clothing industry. Increased activity in sawmills was indicated by the higher accession rates.

All Manufacturing

The Bureau of Labor Statistics' survey of labor turn-over covers approximately 5,500 representative manufacturing establishments, which in April employed nearly 2,500,000 workers. The rates represent the number of changes in personnel per 100 employees on the pay rolls during the month.

The rates shown in table 1 are compiled from reports received from representative plants in 144 industries. In the 28 industries for which separate rates are shown (see table 2) reports were received from representative plants employing at least 25 percent of the workers in each industry.

Table 1 shows the total separation rate classified into quit, discharge, and lay-off rates and the accession rate for each month of 1937 and 1938 and the first four months in 1939 for manufacturing as a whole. The averages of the monthly rates for 1937 and 1938 are also presented.

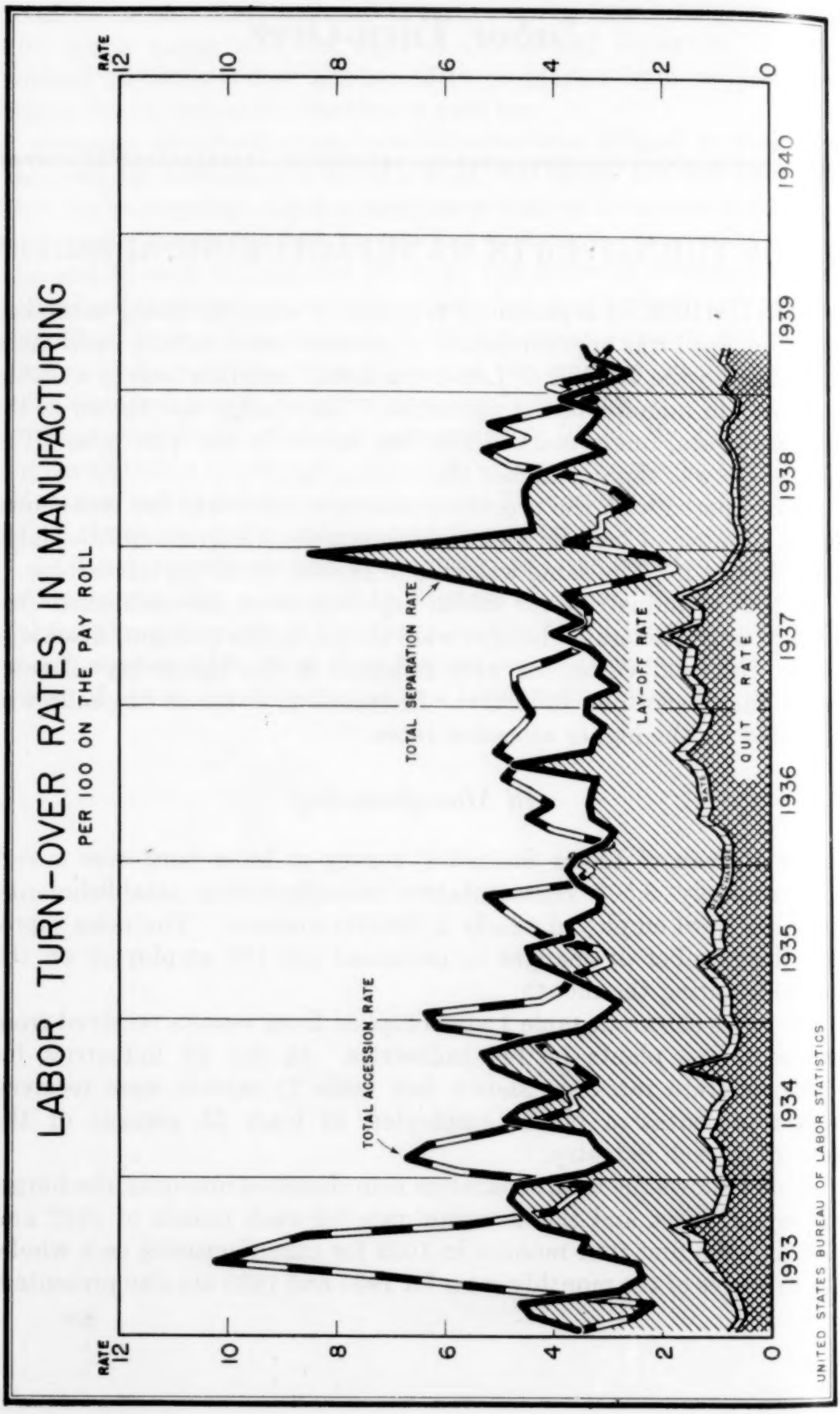
LABOR TURN-OVER RATES IN MANUFACTURING
PER 100 ON THE PAY ROLL
RATE
12
10
8
6
4
2
0
TOTAL ACCESSION RATE
TOTAL SEPARATION RATE
LAY-OFF RATE
QUIT RATE
1933
1934
1935
1936
1937
1938
1939
1940
UNITED STATES BUREAU OF LABOR STATISTICS

TABLE 1.—*Monthly Labor Turn-Over Rates in Representative Factories in 144 Industries*[1]

Class of turn-over and year	January	February	March	April	May	June	July	August	September	October	November	December	Average
Separations:													
Quits:													
1939	0.85	0.64	0.82	0.76									
1938	.52	.49	.61	.59	0.62	0.61	0.59	0.65	0.82	0.78	0.60	0.58	0.62
1937	1.27	1.19	1.43	1.38	1.37	1.89	1.25	1.23	1.59	1.05	.72	.60	1.25
Discharges:													
1939	.10	.10	.13	.10									
1938	.11	.11	.11	.10	.13	.11	.09	.10	.12	.12	.10	.09	.11
1937	.21	.22	.24	.23	.21	.19	.21	.19	.19	.10	.16	.14	.20
Lay-offs: [2]													
1939	2.24	1.87	2.23	2.60									
1938	5.45	3.79	3.74	3.85	3.82	3.69	3.13	2.33	2.62	2.40	2.44	3.21	3.37
1937	1.90	1.44	1.53	1.48	1.79	1.94	2.06	2.57	2.84	4.45	5.99	7.77	2.98
Total:													
1939	3.19	2.61	3.18	3.46									
1938	6.08	4.39	4.46	4.54	4.57	4.41	3.81	3.08	3.56	3.30	3.14	3.88	4.10
1937	3.38	2.85	3.20	3.09	3.37	4.02	3.52	3.99	4.62	5.69	6.87	8.51	4.43
Accessions:													
1939	4.09	3.06	3.34	2.95									
1938	3.78	3.13	3.13	2.58	2.84	3.44	4.81	5.29	4.51	5.19	4.24	3.22	3.85
1937	4.60	4.71	4.74	4.04	3.56	3.69	3.36	3.36	3.78	2.84	1.79	2.12	3.55

[1] The various turn-over rates represent the number of quits, discharges, lay-offs, total separations, and accessions, per 100 employees.
[2] Including temporary, indeterminate, and permanent lay-offs.

Selected Industries

Detailed turn-over rates for 28 selected manufacturing industries are listed in table 2, which gives the number of quits, discharges, and lay-offs, total separations, and total accessions, per 100 employees in reporting firms in April and March 1939 and April 1938.

TABLE 2.—*Monthly Turn-Over Rates (Per 100 Employees) in Specified Manufacturing Industries*

Class of rates	April 1939	March 1939	April 1938	April 1939	March 1939	April 1938	April 1939	March 1939	April 1938
	Automobiles and bodies			Automobile parts			Boots and shoes		
Quit	0.49	0.59	0.47	0.57	0.58	0.46	0.70	0.82	0.68
Discharge	.09	.07	.04	.12	.14	.09	.13	.19	.12
Lay-off	4.22	4.44	4.71	5.84	3.70	6.56	3.72	1.36	2.66
Total separation	4.80	5.10	5.22	6.53	4.42	7.11	4.55	2.37	3.46
Accession	2.41	2.56	2.75	3.48	4.31	5.40	1.21	2.21	1.14
	Brick, tile, and terra cotta			Cement			Cigars and cigarettes		
Quit	0.77	0.59	0.83	0.46	0.27	0.20	1.00	1.20	1.23
Discharge	.14	.11	.18	.05	.05	.09	.14	.13	.11
Lay-off	7.28	2.04	6.24	3.78	2.42	8.90	1.19	2.39	1.65
Total separation	8.19	2.74	7.25	4.29	2.74	9.19	2.33	3.72	2.99
Accession	6.32	8.90	10.09	6.45	15.21	11.29	2.63	3.63	2.00
	Cotton manufacturing			Electrical machinery			Foundries and machine shops		
Quit	1.27	1.47	0.83	0.54	0.58	0.47	0.62	0.54	0.39
Discharge	.27	.20	.14	.05	.05	.08	.09	.09	.07
Lay-off	2.68	2.21	3.76	2.59	1.53	9.11	2.03	1.29	4.54
Total separation	4.22	3.88	4.73	3.18	2.16	9.66	2.74	1.92	5.00
Accession	2.59	3.08	3.20	2.32	3.23	.96	2.63	3.04	1.69

UNITED STATES BUREAU OF LABOR STATISTICS

TABLE 2.—*Monthly Turn-Over Rates (Per 100 Employees) in Specified Manufacturing Industries*—Continued

Class of rates	April 1939	March 1939	April 1938	April 1939	March 1939	April 1938	April 1939	March 1939	April 1938
	Furniture			Glass			Hardware		
Quit	0.72	0.72	0.54	0.37	0.21	0.50	0.54	0.56	0.44
Discharge	.20	.32	.16	.06	.04	.07	.15	.20	.11
Lay-off	3.22	2.43	5.91	2.24	2.68	6.94	1.19	1.57	2.55
Total separation	4.14	3.47	6.61	2.67	2.93	7.51	1.88	2.33	3.10
Accession	3.22	4.45	3.52	2.31	2.65	1.73	1.28	2.37	.94
	Iron and steel			Knit goods			Machine tools		
Quit	0.36	0.38	0.46	1.04	0.93	0.85	0.64	0.56	0.63
Discharge	.04	.04	.04	.11	.11	.09	.05	.13	.06
Lay-off	1.07	.91	3.43	1.36	1.27	1.90	.59	.67	4.13
Total separation	1.47	1.33	3.93	2.51	2.31	2.84	1.28	1.36	4.82
Accession	1.07	1.52	0.83	2.74	3.04	2.59	2.65	3.63	.98
	Men's clothing			Paper and pulp			Petroleum refining		
Quit	0.70	0.73	0.79	0.55	0.55	0.47	0.22	0.19	0.22
Discharge	.09	.14	.03	.11	.12	.22	.07	.06	.07
Lay-off	6.00	2.97	9.04	1.19	.94	.94	1.69	1.22	1.05
Total separation	6.79	3.84	9.86	1.85	1.61	1.63	1.98	1.47	1.34
Accession	3.93	3.92	1.87	2.03	2.02	1.25	2.83	2.08	1.51
	Printing and publishing						Radios and phonographs		
	Book and job			Newspapers					
Quit	0.41	0.38	0.38	0.22	0.17	0.38	1.35	1.22	0.90
Discharge	.09	.21	.11	.29	.22	.07	.15	.17	.11
Lay-off	3.08	4.27	3.85	1.72	1.75	1.01	3.64	4.09	4.58
Total separation	3.58	4.86	4.34	2.23	2.14	1.46	5.14	5.48	5.59
Accession	4.13	3.88	2.05	2.04	2.91	2.04	3.38	4.58	4.67
	Rayon			Rubber boots and shoes			Rubber tires		
Quit	0.52	0.55	0.63	0.70	0.83	0.43	0.36	0.57	0.54
Discharge	.14	.09	.18	.09	.03	.05	.05	.05	.02
Lay-off	2.35	1.25	4.60	2.92	.55	6.48	1.55	.85	2.50
Total separation	3.01	1.89	5.41	3.71	1.41	6.96	1.96	1.47	3.06
Accession	1.08	1.57	2.36	1.27	2.26	2.09	2.04	2.46	1.65
	Sawmills			Slaughtering and meat packing			Steam and hot-water heating apparatus		
Quit	1.16	3.52	1.02	0.47	0.46	0.48	0.54	0.59	0.45
Discharge	.19	.17	.18	.28	.13	.18	.07	.05	.08
Lay-off	2.24	3.48	4.72	4.59	6.65	6.14	3.56	.82	3.61
Total separation	3.59	7.17	5.92	5.34	7.24	6.80	4.17	1.46	4.14
Accession	7.97	5.78	6.99	5.80	6.14	6.42	1.88	2.24	1.00
	Woolen and worsted goods								
Quit	1.24	0.74	0.68						
Discharge	.08	.18	.05						
Lay-off	5.60	9.34	7.15						
Total separation	6.92	10.26	7.88						
Accession	3.92	3.51	5.08						

LABOR TURN-OVER IN THE COTTON-TEXTILE INDUSTRY, 1937 AND 1938 [1]

THERE were more lay-offs per 100 employees in cotton manufacturing in 1938 than in 1937. The decrease of more than one-third in the quit and discharge rates, however, brought total separations to a lower figure than in 1937. There was a marked increase in the rate at which workers were hired.

The increase shown in the accession rate occurred during the last 7 months in 1938. Prior to June, separations had exceeded accessions each month since April 1937. The highest point was reached in November 1937 when the separation rate was 6.58 per 100 workers. The highest accession rate, 6.17 per 100 employees, was shown in August 1938.

Cotton-Textile Industry Compared With All Manufacturing

Turn-over rates in cotton mills moved in the same general direction as those for all manufacturing from 1937 to 1938. Quits and discharges were higher in both years, but total separations, reflecting the lower lay-off rates, were fewer per 100 employees. The accession rate for cotton manufacturing increased nearly four times as much as in industry generally.

TABLE 1.—*Labor Turn-Over Rates in All Manufacturing and in Cotton Manufacturing, 1937 and 1938* [1]

Item	Separations								Accessions	
	Quits		Discharges		Lay-offs [2]		Total			
	1938	1937	1938	1937	1938	1937	1938	1937	1938	1937
All manufacturing	7.44	15.02	1.29	2.37	40.56	35.67	49.29	53.06	46.06	42.47
Cotton manufacturing	11.55	18.52	1.82	2.94	33.28	28.12	46.65	49.58	50.64	38.41

[1] The rates for the cotton industry are based on reports from 249 plants which reported turn-over each month during the 2 years. The annual quit, discharge, lay-off, total separation, and accession rates are found by taking the total for each class of turn-over during the 12 months as the numerator. The denominator is the average of 12 monthly averages each found by taking the reported number of employees at the beginning and at the end of the month and dividing by 2. The resulting fraction is multiplied by 100 to secure the rate on a basis of "per 100 employees."

[2] Including temporary, indeterminate, and permanent lay-offs.

Distribution of Establishments by Turn-Over Rates, 1937 and 1938

In 1937 nearly half the employees were in establishments with quit rates of over 15 per 100 workers; in 1938 the proportion decreased to about one-fourth. Those in plants with quit rates of 35 or more decreased from 8 percent in 1937 to less than 1 percent in 1938.

Nearly two-thirds of the plants, employing 81 percent of the total number of workers, registered a discharge rate of less than 1 per 100

[1] For previous articles on labor turn-over in the cotton-textile industry see Monthly Labor Review, November 1933, p. 1152; and March 1937, p. 680.

in 1938; about one-half of the mills, employing nearly one-third of the total number of employees, were in the same group in 1937.

Lay-offs constitute by far the largest part of all classes of separations. In 1938, 71 percent of the total separations were reported in this group, and 57 percent in 1937. In 1938, 51 percent of the establishments with more than one-half of the employees, and in 1937, 56 percent of the plants with 60 percent of the workers, reported lay-off rates of less than 20 per 100. The number of establishments registering lay-off rates of 90 or more per 100 workers increased from 10 percent in 1937 to 16 percent in 1938.

The number of firms having total separations of less than 20 per 100 workers increased from 22.5 percent in 1937 to 29.3 percent in 1938. The percentage of the total number of workers in this group rose from 15.7 in 1937 to 28.2 in 1938.

The number of establishments reporting less than 10 accessions per 100 workers remained virtually the same for both years, but a slight increase was shown in the number of employees. However, the firms showing accession rates of 70 or more increased from 15.2 percent employing slightly more than a tenth of the total number of workers in 1937, to 28.1 percent with more than one-fifth of the employees in 1938.

TABLE 2.—*Distribution of 249 Cotton-Manufacturing Establishments,*[1] *by Turn-Over Rates, 1937 and 1938*

Class and rate of turn-over	Establishments				Employees			
	1938		1937		1938		1937	
	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage
Quits:								
Under 2.5	26.6	26.6	20.6	20.6	16.0	16.0	13.4	13.4
2.5 and under 5.0	10.8	37.4	8.4	29.0	6.5	22.5	4.9	18.3
5.0 and under 7.5	13.7	51.1	6.0	35.0	13.4	35.9	4.3	22.6
7.5 and under 10.0	11.6	62.7	9.6	44.6	12.7	48.6	9.8	32.4
10.0 and under 15.0	18.1	80.8	21.8	66.4	24.5	73.1	18.6	51.0
15.0 and under 20.0	7.6	88.4	9.6	76.0	8.8	81.9	15.0	66.0
20.0 and under 25.0	6.0	94.4	6.8	82.8	8.7	90.6	8.6	74.6
25.0 and under 30.0	4.0	98.4	4.4	87.2	8.1	98.7	9.8	84.4
30.0 and under 35.0	.8	99.2	5.2	92.4	.5	99.2	7.6	92.0
35.0 and over	.8	100.0	7.6	100.0	.8	100.0	8.0	100.0
Total	100.0		100.0		100.0		100.0	
Discharges:								
Under 0.5	47.0	47.0	39.1	39.1	34.2	34.2	24.6	24.6
0.5 and under 1.0	13.3	60.3	8.4	47.4	12.7	46.9	6.1	30.7
1.0 and under 2.0	17.3	77.6	16.1	63.5	26.2	73.1	23.0	53.7
2.0 and under 3.0	5.2	82.8	8.8	72.3	4.9	78.0	12.9	66.6
3.0 and under 4.0	4.0	86.8	7.6	79.9	8.6	86.6	9.8	76.4
4.0 and under 5.0	2.0	88.8	4.4	8.4	1.4	88.0	6.2	82.6
5.0 and under 7.0	6.8	95.6	5.6	89.9	8.1	96.1	6.9	89.5
7.0 and under 9.0	2.4	98.0	3.6	93.5	2.7	98.8	4.1	93.6
9.0 and under 11.0	.8	98.8	1.6	95.1	.6	99.4	2.8	96.4
11.0 and over	1.2	100.0	4.8	100.0	.6	100.0	3.6	100.0
Total	100.0		100.0		100.0		100.0	

[1] These establishments had 168,382 employees in 1938, and 193,482 in 1937.

TABLE 2.—*Distribution of 249 Cotton-Manufacturing Establishments, by Turn-Over Rates, 1937 and 1938*—Continued

Class and rate of turn-over	Establishments				Employees			
	1938		1937		1938		1937	
	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage	Simple percentage	Cumulative percentage
Lay-offs:								
Under 5	20.2	20.2	20.9	20.9	22.7	22.7	23.6	23.6
5 and under 10	13.7	33.9	11.7	32.6	12.8	35.5	12.1	35.7
10 and under 20	17.3	51.2	24.2	56.8	20.7	56.2	25.2	60.9
20 and under 30	9.2	60.4	11.6	68.4	10.2	66.4	11.1	72.0
30 and under 40	5.2	65.6	7.6	76.0	3.8	70.2	8.3	80.3
40 and under 60	10.8	76.4	7.6	83.6	14.0	84.2	8.1	88.4
60 and under 90	7.6	84.0	6.4	90.0	8.0	92.2	5.0	93.4
90 and under 120	6.8	90.8	5.2	95.2	3.5	95.7	3.2	96.6
120 and under 150	2.4	93.2	.8	96.0	1.0	96.7	.4	97.0
150 and over	6.8	100.0	4.0	100.0	3.3	100.0	3.0	100.0
Total	100.0		100.0		100.0		100.0	
Total separations:								
Under 10	10.4	10.4	8.4	8.4	5.6	5.6	4.6	4.6
10 and under 20	18.9	29.3	14.1	22.5	22.6	28.2	11.1	15.7
20 and under 30	17.8	47.1	18.1	40.6	20.0	48.2	17.9	35.6
30 and under 40	10.4	57.5	16.8	57.4	11.0	59.2	19.6	53.2
40 and under 60	13.7	71.2	16.1	73.5	15.8	75.0	21.9	75.1
60 and under 90	10.0	81.2	12.9	86.4	13.1	88.1	15.9	91.0
90 and under 120	8.4	89.6	3.6	90.0	6.9	95.0	1.7	92.7
120 and under 150	3.2	92.8	4.8	94.8	1.5	96.5	3.6	96.3
150 and under 180	1.2	94.0	1.2	96.0	.5	97.0	.9	97.2
180 and over	6.0	100.0	4.0	100.0	3.0	100.0	2.8	100.0
Total	100.0		100.0		100.0		100.0	
Accessions:								
Under 5	6.4	6.4	4.0	4.0	4.0	4.0	2.1	2.1
5 and under 10	6.0	12.4	8.0	12.0	5.2	9.2	6.0	8.1
10 and under 20	16.9	29.3	21.3	33.3	18.0	27.2	16.6	24.7
20 and under 30	15.4	44.7	21.3	54.6	19.6	46.8	24.6	49.3
30 and under 40	9.6	54.3	14.6	69.2	12.2	59.0	23.2	72.5
40 and under 50	7.2	61.5	7.6	76.8	6.2	65.2	5.7	78.2
50 and under 70	10.4	71.9	8.0	84.8	12.4	77.6	10.2	88.4
70 and under 110	11.7	83.6	8.8	93.6	12.6	90.2	6.3	94.7
110 and under 150	8.4	92.0	4.4	98.0	5.0	95.2	4.5	99.2
150 and over	8.0	100.0	2.0	100.0	4.8	100.0	.8	100.0
Total	100.0		100.0		100.0		100.0	

Turn-Over Rates, by Size of Plant

The quit and discharge rates were lower in both years in mills employing less than 300 workers, whereas the number of lay-offs reported was greater. The accession rate was higher in the smaller mills in 1938, while in 1937 the larger establishments registered the higher rate. The mills with less than 300 workers employed an average of 12,662 persons in 1938 and an average of 13,953 in 1937. Firms with 300 or more on the pay roll had an average of 155,720 workers in 1938 and 179,529 in 1937.

TABLE 3.—*Labor Turn-Over Rates in Cotton Mills, by Size of Establishment, 1937 and 1938*

Class of turn-over	Rate per 100 employees in plants employing in—			
	1938		1937	
	Fewer than 300 employees	300 or more employees	Fewer than 300 employees	300 or more employees
Separations	58.94	45.67	46.78	49.80
Quits	7.36	11.90	10.96	19.10
Discharges	1.15	1.88	1.94	3.02
Lay-offs	50.43	31.89	33.88	27.68
Accessions	63.49	49.60	37.39	38.59

Comparative Turn-Over Rates in Northern and Southern Mills

In both years the southern mills reported a greater number of quits and discharges than the northern mills. However, in 1938 the lay-off rate in northern plants was more than twice as high as in the southern establishments, and more than three times as great in 1937.

The northern mills registered an accession rate of 83.33 per 100 workers in 1938 and 46.63 in 1937, as compared with 36.01 in 1938 and 34.53 in 1937 in the South. The northern mills employed an average of 52,077 workers in 1938 and 63,485 in 1937. The southern establishments had an average of 116,305 in 1938 and 129,997 in 1937.

TABLE 4.—*Comparative Labor Turn-Over Rates in 249 Identical Cotton Mills, North and South, 1937 and 1938*

Class of turn-over	1938		1937	
	North	South	North	South
Separations	67.21	37.46	69.44	39.89
Quits	9.82	12.33	15.20	20.14
Discharges	1.42	2.00	2.25	3.28
Lay-offs	55.97	23.13	51.99	16.47
Accessions	83.33	36.01	46.63	34.53

Employment Offices

OPERATIONS OF UNITED STATES EMPLOYMENT SERVICE, MAY 1939

PLACEMENTS with private employers made by offices of the United States Employment Service during May 1939 reached the highest monthly total in the history of the organization. With one-third of a million placements of all types reported, almost a quarter of a million jobs in private industry were filled, a volume over 50 percent above May 1938. The improvement in placements was accompanied by a marked decline in the number of persons seeking jobs through the Employment Service, falling to the lowest level since January 1938.

The public employment offices made 333,185 placements of all types during May, a seasonal increase in daily rate of 15.5 percent above April, and of over one-third above the rate of last year. The great majority of jobs were with private employers. In this field 242,490 placements were made, an increase from April of 16.6 percent in daily rate. Compared to May 1938 the private placements were 52.3 percent greater in volume and 46 percent larger in daily rate. The seasonal gain in private placements was most notable for men, with 136,164 jobs filled, up 21.8 percent in daily rate over April. Women were placed in 106,326 jobs, a small seasonal increase but a larger gain above the results of last year than was true for men.

Regular placements numbered 110,504, or 63.6 percent over the daily rate for May 1938. The gain in these jobs was likewise most notable for men, with an increase of 78.8 percent over last year, compared to a rise of 50.2 percent for women. Temporary jobs numbered 131,986, or 19.8 percent above the rate for April and one-third higher than the rate of a year ago.

In addition to the private jobs, 90,695 placements in public employment were made, almost all being placements of men.

During May nearly one and one-quarter million persons registered at employment offices for jobs. New applications numbered 516,382, showing a seasonal rise above the rate for April but a decline of more than one-fourth from the number reported in May 1938. The seasonal gain in new applications was accounted for by women, the rate of

applications of men being 3.7 percent lower than the rate for April, while for women it was 11.7 percent higher.

Employment offices also received 697,575 applications from previously registered persons, a decline of 5.8 percent in rate from April but a rise of nearly one-third in rate over May 1938. As was true for new applications, the rate of applications from men declined while that for women increased.

Gains in placements were general for all sections of the country, the largest seasonal gains being reported in the East South Central, Mountain, New England, and Middle Atlantic States. The largest gains from last May occurred in New England, up 77.3 percent, and the West North Central, East North Central, and Middle Atlantic States, all of which reported placements over 50 percent larger than in May 1938. Increases in jobs filled with private employers also were widespread, being reported by 40 States. The largest gains in private placements from May 1938 were reported in the Pacific, East South Central, West North Central, and East North Central regions, in all of which the volume was over 70 percent above that of a year earlier.

Despite the small general seasonal decline in the total number of applications for jobs during May, increases of over 6 percent were reported in both the Pacific and West South Central States. Compared to May 1938, the number of applications received in the Pacific States was over 40 percent higher. The only other notable increase above the volume of last year occurred in the Mountain States area, with a gain of 22.8 percent. This region, with an increase of 8.1 percent above the volume of last May, was also the only group of States showing an increase in the number of new applications, although scattered increases in other geographic areas were widespread.

The number of persons seeking jobs through the public employment offices stood at 6,386,827 at the end of May, a decrease of 2.4 percent from April, and of 15.1 percent from May 1938. This was the smallest number in the active file since January 1938. Men accounted for 4,952,035 of the job seekers and women numbered 1,434,792.

Declines in the active file were general throughout the country, 36 States reporting decreases during the month. Largest declines were reported in the West North Central, Mountain, South Atlantic, and Pacific States. Increases were reported for the New England and Middle Atlantic States. With the exception of the West South Central region, all geographic groups in continental United States reported active-file totals lower than those of a year ago.

During May the 1,664 offices and 2,751 itinerant points affiliated with the United States Employment Service made 196,737 solicitation visits to employers, assisted in making 72,742 supplemental placements in addition to the complete placements reported above, and received 11,597,614 personal visits from job seekers and employers.

TABLE 1.—*Summary of Operations of United States Employment Service, May 1939*

Activity	Number	Percent of change from—		
		April 1939 [1]	May 1938 [1]	May 1937 [1]
Total applications	1,213,957	−3.0	−2.3	+96.6
New applications	516,382	+1.2	−26.9	+78.0
Renewals	697,575	−5.8	+29.9	+113.1
Total placements	333,185	+15.5	+33.7	−17.8
Private	242,490	+16.6	+46.0	−5.6
Public	90,695	+12.6	+9.0	−38.9
Active file (end of month)	6,386,827	−2.4	−15.1	+20.3

[1] Adjusted for number of working days in month.

Placements of veterans through the public employment service showed somewhat larger seasonal increases but smaller gains as compared to the level of a year ago than was true for nonveterans. Veteran placements numbered 15,814, of which 9,570 were in private jobs and 6,244 were in public employment. Both current applications for jobs, which numbered 43,258, and the number of veterans registered in the active file, 333,838, showed greater decreases than were true for nonveterans.

TABLE 2.—*Summary of Veterans' Activities, May 1939*

Activity	Number	Percent of change from—		
		April 1939 [1]	May 1938 [1]	May 1937 [1]
Total applications	43,258	−14.9	−13.6	+40.7
New applications	13,159	−1.1	−45.7	+30.0
Renewals	30,099	−19.8	+16.6	+46.0
Total placements	15,814	+15.7	+8.9	−38.5
Private	9,570	+23.8	+28.4	−29.8
Public	6,244	+5.2	−11.6	−48.3
Active file (end of month)	333,838	−6.5	−26.1	+13.1

[1] Adjusted for number of working days in month.

TABLE 3.—*Operations of United States Employment Service, May 1939*

TOTAL

Division and State	Placements [1]					Field visits	Applications		Active file May 31, 1939	Personal visits	Supplemental placements
	Total	Private			Public		Total	New			
		Number	Percent of change from April [2]	Regular (over 1 month)							
United States	333,185	242,490	+17	110,504	90,695	196,737	1,213,957	516,382	6,386,827	11,597,614	72,742
New England	16,993	10,856	+14	6,597	6,137	6,969	79,638	32,061	475,222	867,299	560
Maine	2,464	1,489	+17	1,119	975	941	9,451	2,360	39,070	78,257	219
New Hampshire	2,720	1,714	+41	820	1,006	1,227	7,731	1,879	31,546	44,618	79
Vermont	1,771	790	+29	473	981	415	2,813	1,092	17,610	17,084	29
Massachusetts	3,621	2,164	−2	1,453	1,457	1,069	30,695	16,483	258,914	454,438	82
Rhode Island	1,132	758	−1	414	374	1,262	8,546	4,250	35,146	117,212	15
Connecticut	5,285	3,941	+14	2,318	1,344	2,055	20,402	5,997	92,936	155,690	136
Middle Atlantic	45,182	36,645	+25	19,760	8,537	40,412	323,051	139,025	1,637,014	3,414,278	2,430
New York	23,533	18,867	+33	9,061	4,666	11,776	170,341	77,961	478,257	[3]1,722,000	940
New Jersey	10,577	9,849	+24	5,975	728	19,596	51,079	24,972	240,692	347,691	213
Pennsylvania	11,072	7,929	+12	4,724	3,143	9,040	101,631	36,092	918,065	1,344,587	1,277
East North Central	57,855	48,240	+12	22,174	9,615	37,453	215,259	89,176	1,266,170	1,806,656	4,943
Ohio	14,901	12,594	+14	5,223	2,307	12,629	63,729	29,598	429,566	767,214	3,028
Indiana	8,073	7,656	+11	3,841	417	3,972	36,511	14,699	202,062	263,655	1,110
Illinois	12,500	12,213	+2	4,929	287	5,420	37,199	19,159	148,093	135,505	262
Michigan	13,014	9,209	+26	4,833	3,805	12,352	50,599	17,168	323,026	491,431	155
Wisconsin	9,367	6,568	+15	3,348	2,799	3,080	27,221	8,552	163,423	148,851	388
West North Central	38,240	23,166	+9	10,023	15,074	23,323	90,726	40,021	580,469	774,072	2,155
Minnesota	8,131	5,420	+24	2,859	2,711	8,128	17,623	6,149	189,764	225,538	842
Iowa	10,641	6,127	+5	1,944	4,514	3,755	17,321	6,712	95,771	154,647	230
Missouri	6,826	5,057	+2	2,575	1,769	4,061	30,074	16,912	135,978	195,211	179
North Dakota	2,487	1,617	−8	652	870	1,368	3,592	1,433	32,840	36,909	116
South Dakota	1,981	1,022	−10	351	959	721	2,873	1,230	31,390	21,199	160
Nebraska	4,712	1,609	+11	751	3,103	2,333	7,704	2,971	51,907	61,294	152
Kansas	3,462	2,314	+26	891	1,148	2,957	11,539	4,614	42,819	79,274	476
South Atlantic	45,379	25,922	+10	13,158	19,457	18,105	149,372	66,158	709,813	1,343,452	1,787
Delaware	1,888	1,501	+75	645	387	266	5,139	1,260	13,268	24,639	19
Maryland	4,305	2,826	+11	1,477	1,479	2,516	16,860	5,126	65,904	136,238	135
Dist. of Col	4,484	4,069	+17	1,573	415	403	9,251	3,285	39,071	71,238	18
Virginia	8,123	4,454	+28	3,109	3,669	2,468	22,903	9,429	48,620	192,681	298
West Virginia	3,899	2,283	−1	1,153	1,616	1,850	23,278	10,040	85,755	259,688	413
North Carolina	9,054	4,316	−13	2,045	4,738	1,673	23,691	10,775	112,707	261,669	468
South Carolina	3,694	1,071	−14	561	2,623	1,321	11,373	4,933	112,012	140,105	73
Georgia	7,897	4,570	+6	2,175	3,327	6,061	21,648	10,992	174,112	136,384	133
Florida	2,035	832	+77	420	1,203	1,547	15,229	10,318	58,364	120,810	230
East South Central	20,751	12,738	+71	5,097	8,013	8,283	70,187	33,289	421,849	623,481	4,370
Kentucky	3,584	2,104	+37	629	1,480	1,399	23,585	11,058	94,453	137,553	623
Tennessee	6,418	4,807	+71	1,764	1,611	3,215	14,366	7,418	133,837	177,300	2,050
Alabama	6,185	4,418	+91	1,677	1,767	1,965	15,465	6,744	130,365	216,130	858
Mississippi	4,564	1,409	+80	1,027	3,155	1,704	16,771	8,069	63,194	92,498	839
West South Central	53,083	42,045	+6	11,680	11,038	33,244	97,243	46,509	519,678	1,106,950	41,767
Arkansas	7,703	6,425	+136	901	1,278	2,348	9,899	5,626	77,822	130,923	5,337
Louisiana	6,022	4,845	−9	2,625	1,177	4,806	19,763	7,869	109,374	213,921	844
Oklahoma	6,965	5,757	−2	1,081	1,208	4,640	18,373	7,717	60,082	165,849	637
Texas	32,393	25,018	−2	7,073	7,375	21,450	49,208	25,297	272,400	596,257	34,949
Mountain	19,883	13,520	+35	6,710	6,363	10,424	49,432	17,223	208,192	387,850	3,499
Montana	2,345	858	−17	604	1,487	1,415	4,479	1,356	27,499	35,620	370
Idaho	3,374	2,563	+57	964	811	1,629	6,299	2,484	18,595	62,405	413
Wyoming	1,549	790	+79	504	759	410	3,619	1,241	12,400	33,106	93
Colorado	5,706	4,547	+71	1,865	1,159	2,668	15,058	5,679	67,385	128,604	529
New Mexico	2,011	1,254	+5	970	757	1,567	3,868	1,654	33,261	28,004	41
Arizona	2,111	1,739	+12	1,018	372	1,068	4,892	1,891	24,334	37,519	1,247
Utah	1,407	808	+13	296	599	1,002	8,604	1,866	20,314	42,849	741
Nevada	1,380	961	+20	489	419	665	2,613	1,052	4,404	19,743	65
Pacific	34,467	28,850	+20	15,134	5,617	18,144	136,658	51,241	556,486	1,256,036	10,880
Washington	4,992	4,231	+19	1,784	761	2,835	15,172	6,766	92,526	159,282	764
Oregon	5,864	4,409	+87	3,379	1,455	3,001	11,487	4,496	55,976	133,812	4,514
California	23,611	20,210	+12	9,971	3,401	12,308	109,999	39,979	407,984	962,942	5,602
Alaska	894	295	+152	89	599	186	1,248	763	2,942	12,913	46
Hawaii	458	213	+11	82	245	194	1,143	916	8,992	4,627	305

[1] Preliminary. [2] Adjusted for number of working days in month. [3] Estimated.

TABLE 3.—*Operations of United States Employment Service, May 1939*—Continued

MEN

Division and State	Placements [1]					Applications			Active file, May 31, 1939
	Total	Private			Public	Total	New		
		Number	Percent of change from April [2]	Regular (over 1 month)			Number	Percent of change from April [2]	
United States	226,239	136,164	+22	56,528	90,075	858,654	335,547	−4	4,952,035
New England	12,084	5,979	+32	3,560	6,105	49,616	17,557	−2	327,755
Maine	1,845	872	+57	630	973	6,807	1,396	−24	30,441
New Hampshire	2,206	1,211	+67	495	995	4,880	1,186	−1	23,616
Vermont	1,424	443	+53	260	981	2,077	731	+7	13,784
Massachusetts	2,478	1,038	+12	728	1,440	17,850	8,914	−5	177,657
Rhode Island	657	283	−7	153	374	4,685	2,205	+7	18,416
Connecticut	3,474	2,132	+22	1,294	1,342	13,317	3,125	+15	63,841
Middle Atlantic	24,885	16,437	+44	8,925	8,448	215,362	84,536	−4	1,230,594
New York	13,907	9,299	+61	4,444	4,608	109,393	49,476	+6	316,933
New Jersey	4,375	3,653	+27	2,452	722	32,086	12,752	−5	171,798
Pennsylvania	6,603	3,485	+25	2,029	3,118	73,883	22,308	−20	741,863
East North Central	34,593	25,104	+24	10,588	9,489	156,543	60,411	−6	1,042,924
Ohio	8,603	6,311	+25	2,485	2,292	47,806	20,908	−23	360,093
Indiana	4,159	3,757	+31	1,402	402	24,042	9,226	−2	161,999
Illinois	6,767	6,495	+12	2,430	272	26,530	13,149	+28	117,368
Michigan	8,976	5,180	+41	2,659	3,796	38,923	11,585	−5	269,208
Wisconsin	6,088	3,361	+21	1,612	2,727	19,242	5,543	+8	134,256
West North Central	27,825	12,846	+14	4,986	14,979	64,450	25,186	+1	462,733
Minnesota	5,603	2,904	+38	1,587	2,699	12,305	4,007	−13	154,554
Iowa	7,739	3,268	+5	875	4,471	12,604	4,397	+0	75,019
Missouri	4,701	2,932	+13	1,320	1,769	19,810	9,848	+17	103,872
North Dakota	1,759	897	−9	312	862	2,656	950	−33	26,747
South Dakota	1,502	547	−10	178	955	2,094	737	−10	25,228
Nebraska	3,938	862	+3	295	3,076	5,957	1,923	−2	42,011
Kansas	2,583	1,436	+40	419	1,147	9,024	3,324	−3	35,302
South Atlantic	33,473	14,098	+6	6,495	19,375	109,890	45,307	−2	527,877
Delaware	1,153	767	+84	342	386	3,541	651	+40	9,352
Maryland	3,335	1,857	+14	945	1,478	12,192	3,235	−3	50,557
District of Columbia	2,166	1,784	+24	603	382	5,859	1,943	−4	26,894
Virginia	5,990	2,330	+20	1,491	3,660	16,259	6,706	+2	34,983
West Virginia	2,668	1,053	+15	530	1,615	20,137	8,518	−24	73,537
North Carolina	7,167	2,439	−18	901	4,728	16,501	7,046	+11	73,229
South Carolina	3,301	684	−15	292	2,617	8,889	3,251	−1	87,598
Georgia	6,051	2,743	−4	1,214	3,308	15,167	6,771	+2	125,395
Florida	1,642	441	+64	177	1,201	11,345	7,186	+11	46,332
East South Central	15,372	7,370	+87	2,517	8,002	53,775	23,523	−12	341,330
Kentucky	2,632	1,156	+75	257	1,476	19,052	8,181	−29	79,024
Tennessee	4,099	2,489	+89	695	1,610	9,669	4,826	−6	104,516
Alabama	4,631	2,867	+88	972	1,764	11,400	4,507	+0	105,019
Mississippi	4,010	858	+93	593	3,152	13,654	6,009	+10	52,771
West South Central	37,356	26,379	+2	5,340	10,977	72,112	33,047	−1	424,317
Arkansas	5,927	4,658	+150	347	1,269	7,629	4,181	+24	67,309
Louisiana	3,941	2,768	−20	1,410	1,173	15,037	5,497	−7	89,247
Oklahoma	4,807	3,615	−6	375	1,192	13,524	5,562	−2	50,563
Texas	22,681	15,338	−8	3,208	7,343	35,922	17,807	−4	217,198
Mountain	15,779	9,480	+47	4,674	6,299	40,134	12,665	−0	174,861
Montana	2,104	642	−19	475	1,462	3,931	1,039	−14	23,577
Idaho	2,636	1,829	+84	562	807	5,230	1,845	+10	16,280
Wyoming	1,383	626	+100	414	757	3,010	984	−14	10,269
Colorado	4,360	3,207	+97	1,192	1,153	11,923	4,264	+13	55,141
New Mexico	1,661	918	+12	755	743	2,996	1,155	+2	27,821
Arizona	1,508	1,139	+20	773	369	3,790	1,328	−21	20,635
Utah	1,042	453	+29	156	589	7,116	1,219	−10	17,413
Nevada	1,085	666	+12	347	419	2,138	831	+8	3,725
Pacific	23,649	18,090	+24	9,326	5,559	94,702	31,892	−2	409,315
Washington	3,777	3,021	+12	1,230	756	11,189	4,213	+14	77,978
Oregon	4,870	3,419	+83	2,599	1,451	8,612	2,988	+1	43,899
California	15,002	11,650	+16	5,497	3,352	74,901	24,691	−5	287,438
Alaska	853	256	+205	78	597	1,139	693	−3	2,695
Hawaii	370	125	+19	39	245	931	730	−25	7,634

[1] Preliminary.

[2] Adjusted for number of working days in month.

TABLE 3.—*Operations of United States Employment Service, May 1939*—Continued

WOMEN

Division and State	Placements [1]				Applications			Active file, May 31, 1939
	Total	Private			Total	New		
		Number	Percent of change from April [2]	Regular (over 1 month)		Number	Percent of change from April [2]	
United States	106,946	106,326	+11	53,976	355,303	180,835	+12	1,434,792
New England	4,909	4,877	−2	3,037	30,022	14,504	+11	147,467
Maine	619	617	−15	489	2,644	964	−12	8,629
New Hampshire	514	503	+3	325	2,851	693	+7	7,930
Vermont	347	347	+8	213	736	361	+53	3,826
Massachusetts	1,143	1,126	−12	725	12,845	7,569	+3	81,267
Rhode Island	475	475	+3	261	3,861	2,045	+18	16,730
Connecticut	1,811	1,809	+5	1,024	7,085	2,872	+43	29,095
Middle Atlantic	20,297	20,208	+14	10,835	107,689	54,489	+13	406,420
New York	9,626	9,568	+14	4,617	60,948	28,485	+8	161,324
New Jersey	6,202	6,196	+22	3,523	18,993	12,220	+6	68,894
Pennsylvania	4,469	4,444	+3	2,695	27,748	13,784	+32	176,202
East North Central	23,262	23,136	+2	11,586	58,716	28,765	+11	223,246
Ohio	6,298	6,283	+4	2,738	15,923	8,690	+8	69,473
Indiana	3,914	3,899	−3	2,439	12,469	5,473	+13	40,063
Illinois	5,733	5,718	−7	2,499	10,669	6,010	+32	30,725
Michigan	4,038	4,029	+12	2,174	11,676	5,583	−7	52,818
Wisconsin	3,279	3,207	+9	1,736	7,979	3,009	+20	29,167
West North Central	10,415	10,320	+2	5,037	26,276	14,835	+13	117,736
Minnesota	2,528	2,516	+11	1,272	5,318	2,142	−6	35,210
Iowa	2,902	2,859	+4	1,069	4,717	2,315	+1	20,752
Missouri	2,125	2,125	−9	1,255	10,264	7,064	+27	32,106
North Dakota	728	720	−7	340	936	483	−9	6,093
South Dakota	479	475	−10	173	779	493	+24	6,162
Nebraska	774	747	+21	456	1,747	1,048	+9	9,896
Kansas	879	878	+9	472	2,515	1,290	+19	7,517
South Atlantic	11,906	11,824	+14	6,663	39,482	20,851	+16	181,936
Delaware	735	734	+66	303	1,598	609	+73	3,916
Maryland	970	969	+6	532	4,668	1,891	−3	15,347
District of Columbia	2,318	2,285	+12	970	3,392	1,342	−1	12,177
Virginia	2,133	2,124	+38	1,618	6,644	2,723	+11	13,637
West Virginia	1,231	1,230	−11	623	3,141	1,522	+29	12,218
North Carolina	1,887	1,877	−6	1,144	7,190	3,729	+23	39,478
South Carolina	393	387	−11	269	2,484	1,682	−5	24,414
Georgia	1,846	1,827	+25	961	6,481	4,221	+4	48,717
Florida	393	391	+94	243	3,884	3,132	+70	12,032
East South Central	5,379	5,368	+54	2,580	16,412	9,766	+12	80,519
Kentucky	952	948	+8	372	4,533	2,877	−7	15,429
Tennessee	2,319	2,318	+56	1,069	4,697	2,592	+20	29,321
Alabama	1,554	1,551	+97	705	4,065	2,237	+26	25,346
Mississippi	554	551	+63	434	3,117	2,060	+22	10,423
West South Central	15,727	15,666	+15	6,340	25,131	13,462	+19	95,361
Arkansas	1,776	1,767	+106	554	2,270	1,445	+62	10,513
Louisiana	2,081	2,077	+11	1,215	4,726	2,372	+8	20,127
Oklahoma	2,158	2,142	+6	706	4,849	2,155	+13	9,519
Texas	9,712	9,680	+9	3,865	13,286	7,490	+18	55,202
Mountain	4,104	4,040	+13	2,036	9,298	4,558	+10	33,331
Montana	241	216	−13	129	548	317	+15	3,922
Idaho	738	734	+14	402	1,069	639	+10	2,315
Wyoming	166	164	+28	90	609	257	+2	2,131
Colorado	1,346	1,340	+30	673	3,135	1,415	+10	12,244
New Mexico	350	336	−9	215	872	499	+17	5,440
Arizona	603	600	+0	245	1,102	563	−3	3,699
Utah	365	355	−2	140	1,488	647	+21	2,901
Nevada	295	295	+42	142	475	221	+11	679
Pacific	10,818	10,760	+15	5,808	41,956	19,349	+2	147,171
Washington	1,215	1,210	+38	554	3,983	2,553	+27	14,548
Oregon	994	990	+103	780	2,875	1,508	+43	12,077
California	8,609	8,560	+7	4,474	35,098	15,288	−4	120,546
Alaska	41	39	+18	11	109	70	+23	247
Hawaii	88	88	+1	43	212	186	+21	1,358

[1] Preliminary.

[2] Adjusted for number of working days in months.

TABLE 4.—*Operations of United States Employment Service, May 1939*

VETERANS

Division and State	Placements [1]					Applications			Active file, May 31, 1939
	Total	Private			Public	Total	New		
		Number	Percent of change from April [2]	Regular (over 1 month)			Number	Percent of change from April [2]	
United States	15,814	9,570	+24	3,203	6,244	43,258	13,159	−1	333,838
New England	870	383	+27	223	487	2,592	697	−7	24,576
Maine	151	66	+120	50	85	325	47	−39	1,990
New Hampshire	135	60	+9	24	75	283	76	+21	2,024
Vermont	86	32	+60	17	54	123	27	−10	817
Massachusetts	157	64	+31	46	93	847	396	−5	15,147
Rhode Island	47	21	−5	14	26	166	24	−47	596
Connecticut	294	140	+11	72	154	848	127	+5	4,002
Middle Atlantic	1,253	824	+50	377	429	7,921	2,446	+4	59,524
New York	656	459	+81	164	197	2,709	1,177	+34	10,197
New Jersey	218	171	+15	99	47	1,440	300	−0	8,905
Pennsylvania	379	194	+33	114	185	3,772	969	−13	40,422
East North Central	2,518	1,826	+39	686	692	8,447	2,782	−1	80,357
Ohio	593	445	+32	146	148	2,498	979	−15	25,358
Indiana	353	313	+61	100	40	1,414	390	−4	11,829
Illinois	510	475	+9	170	35	1,311	573	+16	12,555
Michigan	592	375	+92	165	217	1,998	557	+6	21,014
Wisconsin	470	218	+44	105	252	1,226	283	+20	9,601
West North Central	2,519	1,337	+25	346	1,182	3,822	1,138	+2	37,125
Minnesota	365	168	+60	98	197	747	212	+36	13,329
Iowa	1,012	538	+5	66	474	819	218	−17	5,946
Missouri	427	318	+48	130	109	1,144	406	+11	8,097
North Dakota	87	18	−49	7	69	100	29	−29	1,709
South Dakota	139	82	+95	6	57	102	23	−44	2,000
Nebraska	254	83	−7	16	171	297	83	−14	3,459
Kansas	235	130	+73	23	105	613	167	+7	2,585
South Atlantic	2,081	929	+17	340	1,152	4,936	1,640	−3	34,133
Delaware	96	65	+183	10	31	226	18	−18	754
Maryland	237	136	+8	50	101	552	106	−17	5,195
District of Columbia	193	158	+40	47	35	426	175	+33	4,058
Virginia	359	134	+34	74	225	604	136	−2	2,094
West Virginia	235	107	+75	35	128	819	315	−34	4,599
North Carolina	381	119	−22	34	262	691	229	+22	3,616
South Carolina	180	32	−37	11	148	384	116	+38	4,279
Georgia	299	143	0	62	156	556	175	+2	5,672
Florida	101	35	+35	17	66	678	370	+5	3,866
East South Central	813	378	+72	112	435	2,271	790	−16	22,616
Kentucky	223	92	+77	18	131	893	343	−16	6,447
Tennessee	279	152	+120	31	127	587	187	−28	6,850
Alabama	189	102	+29	42	87	481	147	−10	6,233
Mississippi	122	32	+60	21	90	310	113	+1	3,086
West South Central	2,297	1,701	+9	280	596	3,462	946	−2	24,213
Arkansas	320	238	+74	26	82	384	121	+3	4,086
Louisiana	187	144	+5	84	43	711	130	−16	5,017
Oklahoma	510	394	+3	24	116	1,015	308	+10	5,377
Texas	1,280	925	+3	146	355	1,352	387	−6	9,733
Mountain	1,415	772	+21	293	643	2,546	659	−2	12,629
Montana	194	61	−16	42	133	295	68	+1	1,797
Idaho	375	225	+24	66	150	323	102	−3	1,083
Wyoming	138	27	+93	13	111	213	47	−25	626
Colorado	297	200	+40	60	97	674	199	+8	3,769
New Mexico	64	32	−9	27	32	157	63	+19	1,854
Arizona	124	89	−13	39	35	226	80	−18	2,041
Utah	119	61	+49	16	58	491	47	−20	1,159
Nevada	104	77	+54	30	27	167	53	+23	300
Pacific	1,961	1,404	+10	540	557	7,160	2,004	+4	38,005
Washington	257	182	0	78	75	762	160	+24	6,296
Oregon	313	188	+23	108	125	480	127	+43	4,012
California	1,391	1,034	+10	354	357	5,918	1,717	+1	27,697
Alaska	65	10	+233	4	55	52	28	−13	172
Hawaii	22	6	+200	2	16	49	29	−3	488

[1] Preliminary.

[2] Adjusted for number of working days in months.

Building Operations

SUMMARY OF BUILDING CONSTRUCTION IN PRINCIPAL CITIES, MAY 1939 [1]

A GAIN of 92.8 percent over May 1938 was reported in the permit valuations of new residential construction in May. All sections of the country shared in the increased residential construction activity and increases of more than 100 percent were reported in the East North Central, West North Central, East South Central, and West South Central geographic divisions. Gains were also reported in other types of construction over the year period. New nonresidential construction increased 61.5 percent and additions, alterations, and repairs to existing structures showed a gain of 17.6 percent. Total building construction was greater by 67.8 percent than during the same month a year ago.

A comparison of building-permit valuations for May with valuations for April indicated a gain of 23.7 percent for total building construction. Indicated expenditures for new residential construction were 38.0 percent greater than in April, and for new nonresidential construction the gain was 12.9 percent. Permit valuations of additions, alterations, and repairs were 0.6 percent less than in the preceding month.

Comparison of May 1939 with April 1939 and May 1938

A summary of building construction in 1,929 identical cities in May 1939, with percentage changes from April 1939 and May 1938, is given in table 1.

TABLE 1.—*Summary of Building Construction for Which Permits Were Issued in 1,929 Identical Cities, May 1939*

Class of construction	Number of buildings			Permit valuation		
	May 1939	Percentage change from—		May 1939	Percentage change from—	
		April 1939	May 1938		April 1939	May 1938
All construction	73,783	+18.6	+23.7	$192,916,362	+23.7	+67.8
New residential	19,351	+18.8	+46.2	116,306,853	+38.0	+92.8
New nonresidential	13,143	+18.9	+26.1	45,576,084	+12.9	+61.5
Additions, alterations, and repairs	41,289	+18.4	+14.7	31,033,425	−0.6	+17.6

[1] More detailed information by geographic divisions and individual cities is given in a separate pamphlet entitled "Building Construction, May 1939," copies of which will be furnished upon request.

A summary of permit valuations of housekeeping dwellings and the number of families provided for in new dwellings in 1,929 identical cities, having a population of 1,000 and over, is shown in table 2 for May 1939 compared with April 1939 and May 1938.

TABLE 2.—*Permit Valuation of Housekeeping Dwellings and Families Provided for in 1,929 Identical Cities, May 1939*

Type of dwelling	Permit valuation of housekeeping dwellings			Number of families provided for in new dwellings		
	May 1939	Percentage change from—		May 1939	Percentage change from—	
		April 1939	May 1938		April 1939	May 1938
All types	$115,045,500	+38.7	+91.5	31,058	+36.2	+93.4
1-family	70,336,359	+17.8	+39.8	17,461	+15.7	+40.4
2-family [1]	3,446,510	+12.0	+25.5	1,264	+1.2	+27.4
Multifamily [2]	41,262,631	+104.8	+486.8	12,333	+90.6	+368.2

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

Construction During First 5 Months, 1938 and 1939

Cumulative totals for the first 5 months of 1939 compared with the same months of the preceding year are shown in table 3. The data are based on reports received from cities having a population of 1,000 and over.

TABLE 3.—*Permit Valuation of Building Construction in Reporting Cities of 1,000 Population and Over, First 5 Months, 1938 and 1939*

Class of construction	Permit valuation of building construction, first 5 months of—		Percentage change
	1939	1938	
All construction	$834,302,538	$651,783,242	+28.0
New residential	458,180,864	310,792,383	+47.4
New nonresidential	233,920,856	208,733,562	+12.1
Additions, alterations, and repairs	142,200,818	132,257,297	+7.5

Table 4 presents the permit valuation of housekeeping dwellings and number of family-dwelling units provided in cities with a population of 1,000 and over for the first 5 months of 1938 and 1939.

TABLE 4.—*Permit Valuation of Housekeeping Dwellings and Number of Family-Dwelling Units, First 5 Months, 1938 and 1939, by Type of Dwelling*

Type of dwelling	Permit valuation of housekeeping dwellings, first 5 months of—		Percentage change	Number of family-dwelling units, first 5 months of—		Percentage change
	1939	1938		1939	1938	
All types	$452,787,531	$308,987,541	+46.5	126,024	87,115	+44.7
1-family	281,882,951	194,569,022	+44.9	71,600	49,636	+44.3
2-family [1]	14,009,337	13,407,589	+4.5	5,465	5,223	+4.6
Multifamily [2]	156,895,243	101,010,930	+55.3	48,959	32,256	+51.8

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

Analysis by Size of City, May 1939

Table 5 shows the value of permits issued for building construction in May 1939 compared with April 1939 and May 1938, by size of city and by class of construction.

TABLE 5.—*Permit Valuation of Building Construction in 1,929 Identical Cities, by Size of City, May 1939*

Size of city	Number of cities	Total construction			New residential buildings		
		Permit valuation, May 1939	Percentage change from—		Permit valuation, May 1939	Percentage change from—	
			April 1939	May 1938		April 1939	May 1938
Total, all reporting cities	1,929	$192,916,362	+23.7	+67.8	$116,306,853	+38.0	+92.8
500,000 and over	14	58,819,681	+23.0	+61.2	33,842,104	+28.9	+80.3
100,000 and under 500,000	79	54,690,308	+50.1	+89.4	36,290,949	+81.1	+160.6
50,000 and under 100,000	94	19,939,540	+36.2	+83.0	10,261,856	+43.3	+85.6
25,000 and under 50,000	159	17,770,986	+19.0	+57.1	10,604,210	+37.4	+83.1
10,000 and under 25,000	407	20,391,834	−10.7	+49.4	12,180,929	+9.4	+55.6
5,000 and under 10,000	362	11,523,684	+5.5	+58.5	7,271,857	+3.1	+67.3
2,500 and under 5,000	416	7,500,666	+21.6	+58.4	4,542,016	+23.0	+51.1
1,000 and under 2,500	398	2,279,663	+7.1	+33.2	1,312,932	+5.8	+15.1

Size of city	New nonresidential buildings			Additions, alterations, and repairs			Population (census of 1930)
	Permit valuation, May 1939	Percentage change from—		Permit valuation, May 1939	Percentage change from—		
		April 1939	May 1938		April 1939	May 1938	
Total, all reporting cities	$45,576,084	+12.9	+61.5	$31,033,425	−0.6	+17.6	59,254,353
500,000 and over	14,243,551	+84.1	+72.9	10,734,026	−22.3	+13.2	21,449,853
100,000 and under 500,000	10,360,435	−2.7	+35.1	8,038,924	+39.7	+10.4	15,017,880
50,000 and under 100,000	6,361,518	+27.0	+120.6	3,316,166	+34.2	+33.6	6,265,862
25,000 and under 50,000	4,151,437	−3.6	+52.0	3,015,339	+3.6	+8.2	5,627,930
10,000 and under 25,000	4,928,648	−38.8	+43.6	3,282,257	−10.3	+37.5	6,235,780
5,000 and under 10,000	2,634,482	+12.2	+52.2	1,617,345	+6.2	+35.3	2,540,239
2,500 and under 5,000	2,350,578	+40.9	+100.1	608,072	−24.7	+9.5	1,486,671
1,000 and under 2,500	545,435	−11.3	+49.7	421,296	+54.5	+103.8	630,138

The permit valuation of housekeeping dwellings in the 1,929 identical cities reporting for April and May 1939, together with the number of family-dwelling units provided in new dwellings, by size of city, is given in table 6.

TABLE 6.—*Permit Valuation of Housekeeping Dwellings and Families Provided for in 1,929 Identical Cities, by Size of City, April and May 1939*

Size of city	Permit valuation of housekeeping dwellings			Number of families provided for in—							
				All types		1-family dwellings		2-family dwellings [1]		Multifamily dwellings [2]	
	May 1939	April 1939	Percentage change	May 1939	April 1939	May 1939	April 1939	May 1939	April 1939	May 1939	April 1939
Total, all reporting cities	$115,045,500	$82,929,364	+38.7	31,058	22,808	17,461	15,087	1,264	1,249	12,333	6,472
500,000 and over	33,760,004	26,244,090	+28.6	8,551	6,810	4,253	3,634	368	303	3,930	2,873
100,000 and under 500,000	36,208,949	19,999,560	+81.0	10,282	5,472	3,761	3,541	352	302	6,169	1,629
50,000 and under 100,000	10,111,856	6,975,777	+45.0	2,804	2,038	1,778	1,427	209	190	817	421
25,000 and under 50,000	10,604,210	7,633,952	+38.9	3,065	2,211	1,910	1,585	91	143	1,064	483
10,000 and under 25,000	11,856,876	11,065,141	+7.2	3,140	3,127	2,828	2,368	150	151	162	608
5,000 and under 10,000	6,701,157	6,116,028	+9.6	1,752	1,831	1,535	1,322	49	114	168	395
2,500 and under 5,000	4,491,516	3,657,186	+22.8	1,085	947	1,031	869	37	36	17	42
1,000 and under 2,500	1,310,932	1,237,630	+5.9	379	372	365	341	8	10	6	21

[1] Includes 1- and 2-family dwellings with stores.
[2] Includes multifamily dwellings with stores.

The information on building permits issued is based on reports received by the Bureau of Labor Statistics from 1,929 identical cities having a population of 1,000 and over.

The information is collected by the Bureau of Labor Statistics from local building officials, except in the States of Illinois, Massachusetts, New Jersey, New York, North Carolina, and Pennsylvania, where the State departments of labor collect and forward the information to the Bureau. The permit valuations shown in this report are estimates made by prospective builders on applying for permits to build. No land costs are included. Only building projects within the corporate limits of the cities enumerated are included in the Bureau's tabulation. The data collected by the Bureau of Labor Statistics show, in addition to private and municipal construction, the value of buildings for which contracts were awarded by the Federal and State Governments in the cities included in the report. For May 1939 the value of these buildings amounted to $36,798,000, for April 1939 to $9,714,000, and for May 1938 to $3,001,000.

Construction From Public Funds

The value of contracts awarded and force-account work started during May 1939, April 1939, and May 1938 on construction projects financed wholly or partially from various Federal funds is shown in table 7.

TABLE 7.—*Value of Contracts Awarded and Force-Account Work Started on Projects Financed from Federal Funds, May 1939, April 1939, and May 1938* [1]

Federal agency	Contracts awarded and force-account work started in—		
	May 1939	April 1939 [2]	May 1938 [2]
Total	$110,457,029	$127,977,552	$87,807,587
Public Works Administration:			
Federal	853,088	1,830,191	398,259
Non-Federal:			
N. I. R. A.	905,569	148,220	5,816,752
E. R. A. A.	302,726	4,780,151	10,903,334
P. W. A. A., 1938	39,870,737	66,688,737	
Federal projects under The Works Program	4,605,991	2,403,628	7,816,410
Regular Federal appropriations	33,677,157	46,003,659	62,866,532
U. S. Housing Authority	30,241,761	6,122,966	6,300

[1] Preliminary, subject to revision. [2] Revised.

The value of public-building and highway construction awards financed wholly from appropriations from State funds, as reported by the various State governments for May 1939, April 1939, and May 1938, is shown in the following statement.

	Public buildings	*Highway construction*
May 1939	$278,158	$4,012,847
April 1939	3,485,181	2,563,411
May 1938	918,211	13,571,996

Retail Prices

FOOD PRICES IN MAY 1939

THE average retail cost of food for 51 cities combined declined 0.1 percent between April and May, due in large part to a decrease of 1.4 percent in the cost of dairy products. Although prices for all dairy products were lower, the most important change was the continued downward movement amounting to 2.0 percent in the average price of fresh milk.

The May index for all foods was 76.5 percent of the 1923–25 average. It was 3.3 percent lower than in May 1938. Lower costs for the year interval were recorded for all major commodity groups except fresh fruits and vegetables.

The May index was 22.5 percent above the level of the corresponding month of 1933 and 25.3 percent below May 1929.

Details by Commodity Groups

The cost of cereals and bakery products, which has tended downward since August 1937, declined 0.2 percent between April and May. Prices were lower for 10 of the 13 items included in the group. The largest relative price change was a decrease of 1.0 percent recorded for corn flakes. Flour and white bread showed further price reductions of 0.3 percent and 0.2 percent, respectively. Flour prices were 11.9 percent lower than in May 1938, and bread prices showed a reduction of 9.7 percent for the same interval.

The average cost of meats showed no change between April and May. Price increases reported for 10 of the 21 items included in the group were offset by decreases for the remaining items. An increase of 5.6 percent in the cost of lamb represented generally higher prices for all cuts. The average cost for beef and canned fish advanced 0.4 percent each. Pork products averaged 1.3 percent lower as a result of price decreases for all items, except sliced ham, which advanced slightly. The cost of veal declined 1.0 percent, and roasting chickens were 0.1 percent lower.

Dairy products showed an average decline of 1.4 percent. Prices were lower for all items in the group, with decreases ranging from

0.2 percent for butter to 2.0 percent for fresh milk. Reductions in the price of fresh milk amounted to approximately 1½ cents per quart in Louisville, and 1 cent in Boston and Chicago. An increase of nearly 1 cent per quart was recorded for Salt Lake City.

Egg costs decreased 0.2 percent between April and May, and were 8.6 percent below the level of May 1938.

The average cost of fruits and vegetables showed an increase of 1.2 percent in May compared with April. A seasonal increase of 6.4 percent in the price of potatoes was the most important factor in this advance. The average increase for fresh fruits and vegetables was 1.4 percent. In addition to potatoes price increases were reported for six other fresh items ranging from 0.6 percent for bananas to 8.8 percent for spinach. The price of cabbage decreased 20.4 percent, contrary to the usual seasonal movement. Green beans dropped 15.7 percent, and onions 3.8 percent. The cost of the canned items declined 0.1 percent and the dried products 0.6 percent. The greatest relative price changes for these two subgroups were decreases of 3.2 percent for canned green beans and 2.0 percent for dried prunes.

A drop of 0.9 percent in the price of coffee was chiefly responsible for a decrease of 0.8 percent in the cost of beverages and chocolate. Lower coffee prices were reported from 39 of the 51 cities. Tea declined 0.8 percent, while cocoa advanced 0.8 percent. Chocolate was practically unchanged.

The index for fats and oils fell 0.9 percent between April and May and was 8.1 percent below the level of May 1938. Decreases for the month, reported for six of the seven items in the group, ranged from 0.1 percent for mayonnaise to 2.0 percent for lard. The price of lard was lower in May than at any time since the summer of 1934.

The price of sugar, which was 0.4 percent higher in May than in April, resulted in an increase of 0.2 percent in the cost of the sugar and sweets group. The price of sugar was 4.2 percent below the level of the corresponding period in 1938.

Indexes of retail food costs for May and April 1939, together with indexes for May 1938, 1933, and 1929, are shown in table 1. The accompanying chart shows the trend in the cost of all foods and of each major commodity group for the period from January 1929 to May 1939, inclusive.

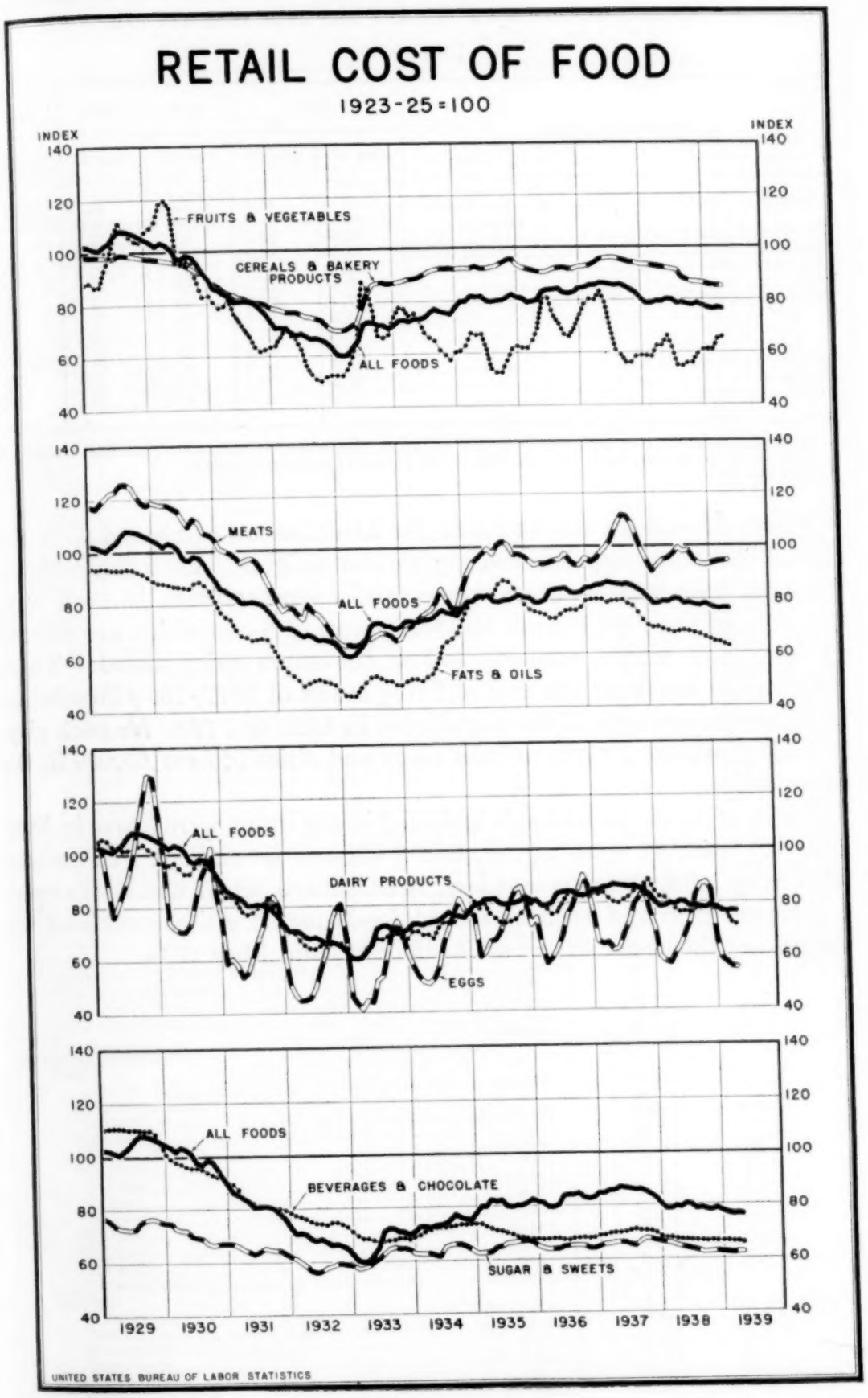
RETAIL COST OF FOOD
1923-25=100
INDEX
140
120
100
80
60
40
FRUITS & VEGETABLES
CEREALS & BAKERY PRODUCTS
ALL FOODS
MEATS
ALL FOODS
FATS & OILS
ALL FOODS
DAIRY PRODUCTS
EGGS
ALL FOODS
BEVERAGES & CHOCOLATE
SUGAR & SWEETS
1929
1930
1931
1932
1933
1934
1935
1936
1937
1938
1939
UNITED STATES BUREAU OF LABOR STATISTICS

TABLE 1.—*Indexes of Retail Food Costs in 51 Large Cities Combined,*[1] *by Commodity Groups, May and April 1939 and May 1938, 1933, and 1929*

[1923-25=100]

Commodity group	1939		1938	1933	1929
	May 16[2]	Apr. 18	May 17	May 15	May 15
All foods	76.5	76.6	79.1	62.5	102.4
Cereals and bakery products	84.9	85.1	92.2	71.0	98.0
Meats	94.2	94.1	95.2	64.1	122.6
Dairy products	71.2	72.2	77.2	63.7	102.1
Eggs	55.3	55.4	60.5	44.0	80.6
Fruits and vegetables	65.7	64.9	62.5	59.3	93.1
Fresh	65.3	64.4	61.1	59.5	91.8
Canned	73.8	73.9	78.5	66.0	97.8
Dried	56.5	56.8	59.3	51.2	102.4
Beverages and chocolate	65.5	66.0	66.9	67.7	110.8
Fats and oils	62.4	63.0	68.0	48.0	93.5
Sugar and sweets	62.1	62.0	64.3	60.0	72.6

[1] Aggregate costs of 42 foods in each city prior to Jan. 1, 1935, and of 84 foods since that date, weighted to represent total purchases, have been combined with the use of population weights.
[2] Preliminary.

Prices of each of the 84 foods for 51 cities are combined with the use of both consumption and population weights. Quantity weights for each food include the average family consumption in each city, not only of the food priced, but for groups of foods which are related in kind and which seem to follow the same price trend. These weights are based on the cost of living study of 1917–19. Population weights are averages of the population in 1920 and 1930 for each city, including adjacent metropolitan areas and cities of over 50,000 in the same region.

Prices of 50 of the 84 foods included in the index were lower in May than in April, 31 were higher, and 3 showed no change. Compared with May 1938, 59 foods cost less, 24 cost more, and 1 was unchanged.

Average prices of each of the 84 foods for 51 cities combined are shown in table 2 for May and April 1939, and May 1938.

TABLE 2.—*Average Retail Prices of 84 Foods in 51 Large Cities Combined, May and April 1939 and May 1938*

[*Indicates the foods included in indexes prior to Jan. 1, 1935]

Article		1939		1938
		May 16 [1]	Apr. 18	May 17
Cereals and bakery products:				
Cereals:		*Cents*	*Cents*	*Cents*
*Flour, wheat	pound	3.6	3.6	4.1
*Macaroni	do	14.2	14.3	14.9
*Wheat cereal	28-oz. package	24.2	24.2	24.4
*Corn flakes	8-oz. package	7.2	7.3	7.4
*Corn meal	pound	4.5	4.5	4.8
Hominy grits	24-oz. package	8.4	8.4	8.8
*Rice	pound	7.5	7.5	7.8
*Rolled oats	do	7.1	7.1	7.2
Bakery products:				
*Bread, white	do	8.0	8.0	8.8
Bread, whole-wheat	do	9.2	9.2	9.8
Bread, rye	do	9.2	9.2	10.0
Cake	do	25.1	25.1	24.9
Soda crackers	do	15.2	15.2	16.3
Meats:				
Beef:				
*Sirloin steak	do	39.7	39.5	37.5
*Round steak	do	36.0	36.2	34.6
*Rib roast	do	30.5	30.3	28.8
*Chuck roast	do	23.9	23.9	22.8
*Plate	do	15.9	15.7	15.3
Liver	do	27.8	26.7	25.7
Veal:				
Cutlets	do	42.7	43.1	41.8
Pork:				
*Chops	do	30.4	30.6	33.0
Loin roast	do	24.1	24.3	26.9
*Bacon, sliced	do	32.5	33.4	36.7
Bacon, strip	do	27.4	28.2	30.7
*Ham, sliced	do	46.7	46.6	45.8
Ham, whole	do	28.0	28.2	28.4
Salt pork	do	18.1	18.7	20.5
Lamb:				
Breast	do	13.3	12.7	12.7
Chuck	do	23.3	22.0	21.8
*Leg	do	30.1	28.5	28.4
Rib chops	do	38.6	36.4	35.4
Poultry:				
*Roasting chickens	do	31.1	31.1	36.1
Fish:				
Salmon, pink	16-oz. can	12.7	12.6	13.7
*Salmon, red	do	22.9	22.9	26.8
Dairy products:				
*Butter	pound	29.9	30.0	33.3
*Cheese	do	24.1	24.4	26.8
Cream	½ pint	13.5	13.7	14.5
Milk, fresh (delivered and store)	quart	11.3	11.5	12.1
*Milk, fresh (delivered)	do	11.6	11.7	12.4
Milk, fresh (store)	do	10.5	10.9	11.4
*Milk, evaporated	14½-oz. can	6.8	6.8	7.1
*Eggs	dozen	28.1	28.1	30.8
Fruits and vegetables:				
Fresh:				
Apples	pound	5.8	5.7	4.7
*Bananas	do	6.2	6.2	6.1
Lemons	dozen	22.9	23.5	27.2
*Oranges	do	25.8	24.4	25.8
Beans, green	pound	10.6	12.6	8.8
*Cabbage	do	4.1	5.1	3.8
Carrots	bunch	5.6	5.4	6.1
Celery	stalk	8.3	8.5	8.2
Lettuce	head	7.6	7.7	9.7
*Onions	pound	4.4	4.6	5.0
*Potatoes	do	2.7	2.6	2.4
Spinach	do	6.5	5.9	5.6
Sweetpotatoes	do	4.7	4.5	4.2
Canned:				
Peaches	No. 2½ can	16.7	16.7	19.5
Pears	do	20.3	20.2	21.7
Pineapples	do	21.3	21.3	23.1
Asparagus	No. 2 can	27.8	27.8	30.2
Beans, green	do	10.0	10.3	11.5
*Beans with pork	16-oz. can	7.2	7.3	7.4

[1] Preliminary.

TABLE 2.—*Average Retail Prices of 84 Foods in 51 Large Cities Combined, May and April 1939 and May 1938*—Continued

Article		1939		1938
		May 16	Apr. 18	May 17
Fruits and vegetables—Continued.				
Canned—Continued.		*Cents*	*Cents*	*Cents*
*Corn [2]	No. 2 can	10.3	10.3	11.7
*Peas	do	13.8	13.4	15.4
*Tomatoes	do	8.7	8.6	8.9
Tomato soup	10½-oz. can	7.5	7.3	7.4
Dried:				
Peaches	pound	15.1	15.0	15.5
*Prunes	do	9.0	9.1	9.2
*Raisins	15-oz. package	9.4	9.4	10.0
Black-eyed peas	pound	8.0	7.7	7.7
Lima beans	do	8.9	8.9	9.1
*Navy beans	do	5.8	5.8	6.3
Beverages and chocolate:				
*Coffee	do	22.4	22.6	23.2
*Tea	½ pound	17.5	17.6	17.6
Cocoa	8-oz. can	8.6	8.5	8.6
Chocolate	8-oz. package	16.1	16.1	16.1
Fats and oils:				
*Lard	pound	10.5	10.7	12.9
Shortening, other than lard:				
In cartons	do	12.3	12.4	13.1
In other containers	do	20.3	20.3	19.5
Salad oil	pint	24.0	24.3	24.8
Mayonnaise	½ pint	17.2	17.2	17.5
*Oleomargarine	pound	16.1	16.3	17.3
Peanut butter	do	18.0	18.0	18.6
Sugar and sweets:				
*Sugar	do	5.1	5.1	5.4
Corn sirup	24-oz. can	13.7	13.8	14.0
Molasses	18-oz. can	13.6	13.6	13.9
Strawberry preserves	pound	20.6	20.8	21.7

[2] Since April 1939 the price of canned corn has been based upon quotations of cream style only, and are not strictly comparable with average prices for earlier months which included both cream style and whole-kernel corn.

Details by Regions and Cities

The decrease of 0.1 percent between April and May in the average retail cost of food resulted from lower costs reported in 24 cities which more than offset higher costs reported in 24 other cities. The most marked decreases were 2.9 percent for Memphis, 2.2 percent for Washington, and 2.1 percent for Detroit. In each of these cities, prices of certain of the fresh vegetables dropped sharply. In Washington, meat costs showed a greater decline than in any other city, and the price of eggs went down 4.0 percent. Food cost increases were greatest in Salt Lake City, where an advance of 4.0 percent was due in large part to an increase of 9.5 percent in the cost of fresh fruits and vegetables and a rise of about 1 cent per quart in the price of fresh milk. An increase of 3.1 percent reported for Minneapolis was chiefly the result of a sharp upturn in the cost of fresh fruits and vegetables in that city. Potato prices advanced 40.2 percent and onions were 19.2 percent higher. An increase of 2.4 percent in the price of white bread also contributed to the advance recorded for Minneapolis.

Indexes of retail food costs by regions and cities are presented in table 3 for May and April 1939 and May 1938.

TABLE 3.—*Indexes of the Average Retail Cost of All Foods, by Regions and Cities,*[1] *May and April 1939 and May 1938*

[1923–25=100]

Region and city	1939		1938	Region and city	1939		1938
	May 16[2]	Apr. 18	May 17		May 16[2]	Apr. 18	May 17
United States	**76.5**	**76.6**	**79.1**	**South Atlantic**	**76.1**	**76.6**	**77.5**
New England	**74.5**	**75.4**	**77.0**	Atlanta	70.0	70.3	72.9
Boston	72.7	73.9	74.7	Baltimore	82.6	83.8	84.0
Bridgeport	79.2	79.1	83.1	Charleston, S. C	76.0	76.1	78.3
Fall River	77.9	78.7	79.7	Jacksonville	74.7	73.9	76.3
Manchester	78.6	79.1	80.9	Norfolk	74.8	74.1	76.2
New Haven	78.0	78.3	81.7	Richmond	70.7	70.4	70.9
Portland, Maine	76.1	75.5	77.3	Savannah	75.8	75.5	77.2
Providence	73.5	74.5	76.8	Washington, D. C	78.6	80.4	79.4
Middle Atlantic	**77.5**	**77.0**	**80.1**	**East South Central**	**70.3**	**70.6**	**72.5**
Buffalo	76.9	76.5	78.6	Birmingham	65.9	65.6	67.2
Newark	80.4	80.1	82.0	Louisville	80.1	80.5	82.5
New York	77.9	77.6	79.9	Memphis	70.7	72.8	76.0
Philadelphia	79.0	78.4	81.5	Mobile	73.6	73.5	75.1
Pittsburgh	74.0	73.6	79.0	**West South Central**	**74.7**	**75.3**	**76.4**
Rochester	77.2	76.2	80.6	Dallas	69.4	70.2	73.0
Scranton	74.8	73.5	77.1	Houston	75.8	75.8	77.0
East North Central	**76.6**	**77.0**	**80.5**	Little Rock	71.4	72.1	73.1
Chicago	78.0	78.0	81.1	New Orleans	81.7	82.7	80.8
Cincinnati	76.3	77.4	79.5	**Mountain**	**79.9**	**78.8**	**82.1**
Cleveland	78.4	78.7	80.2	Butte	74.9	73.2	77.8
Columbus, Ohio	75.9	76.2	77.6	Denver	82.4	82.4	85.1
Detroit	73.2	74.7	80.0	Salt Lake City	76.9	73.9	78.0
Indianapolis	76.7	76.0	80.8	**Pacific**	**74.7**	**74.8**	**76.4**
Milwaukee	79.6	79.3	85.4	Los Angeles	69.4	69.8	71.9
Peoria	79.7	78.1	80.6	Portland, Oreg	79.1	78.2	79.5
Springfield, Ill	76.5	75.3	79.1	San Francisco	78.6	78.9	80.1
West North Central	**80.7**	**80.7**	**82.0**	Seattle	78.6	77.4	78.4
Kansas City	79.1	80.4	80.4				
Minneapolis	85.7	83.2	84.7				
Omaha	76.0	75.5	76.7				
St. Louis	81.6	82.7	84.5				
St. Paul	81.1	79.2	81.3				

[1] Aggregate costs of 42 foods in each city prior to Jan. 1, 1935, and of 84 foods since that date, weighted to represent total purchases, have been combined for regions and for the United States with the use of population weights.

[2] Preliminary.

Wholesale Prices

WHOLESALE PRICES IN MAY 1939 [1]

THE Bureau of Labor Statistics index of wholesale commodity prices for May remained unchanged from April and was 76.2 percent of the 1926 average. Compared with May 1938 commodity prices at wholesale decreased 2.4 percent.

Of the 10 major commodity groups, 5 showed declines ranging from 0.1 percent for building materials and chemicals and drugs to 0.6 percent for foods. Advances were shown for 4 groups—housefurnishing goods, 0.1 percent; fuel and lighting materials, 0.7 percent; hides and leather products, 0.8 percent; and textile products, 0.9 percent. The index for market prices of farm products remained at the level of April. Compared with a year ago, indexes for three of the groups were higher—hides and leather products, textile products, and miscellaneous commodities. The reamaining seven groups showed decreases ranging from 1.0 percent for building materials to 5.6 percent for farm products.

The May index for raw material prices rose 0.6 percent but still was 2.5 percent below the level of a year ago. The semimanufactured commodities group index declined 0.1 percent during the month, and finished products decreased 0.2 percent.

The general average of wholesale prices of nonagricultural commodities, as measured by the index of "All commodities other than farm products," remained unchanged from the preceding month. Average prices of industrial commodities at wholesale advanced 0.1 percent, according to the index for "All commodities other than farm products and foods." The May index for nonagricultural commodities was 1.9 percent below that of May 1938, and for industrial commodities it was 1.2 percent lower.

A sharp decline in livestock and poultry prices was counterbalanced by marked increases in prices of grains and "Other farm products," including cotton, apples (Chicago), lemons, oranges, fresh milk (Chicago), clover seed, onions, and wool. The index for the group remained at 63.7 percent of the 1926 average. The May level was 5.6 percent below that of a year ago. Quotations were lower for steers,

[1] More detailed information on wholesale prices is given in the Wholesale Price pamphlet and will be furnished upon request.

hogs, sheep, live poultry, eggs, apples (New York and Seattle markets), alfalfa hay, hops, flaxseed, sweetpotatoes, and white potatoes.

A decline of 3.0 percent in meat prices at wholesale largely accounted for the 0.6 percent decrease in the index for foods. Dairy products advanced 0.9 percent and cereals rose 2.2 percent. Higher prices were reported for butter, cheese, powdered milk, rye, and wheat flour, hominy grits, corn meal, canned pears and apricots, bananas, canned spinach, tomatoes, and string beans, dried pea beans, fresh lamb and veal, cured beef, coffee, copra, canned salmon, cured fish, glucose, lard, and vegetable oils. Wholesale prices were lower for oatmeal, canned cherries and peaches, fresh beef, fresh and cured pork, dressed poultry, cocoa beans, oleomargarine, black pepper, raw sugar, and edible tallow. The May index for the food group, 68.2, was 5.4 percent below the corresponding month of last year.

The hides and leather products group index advanced 0.8 percent to 91.6 percent of the 1926 average. The price of shoes increased fractionally and hides and skins rose 5.6 percent because of higher prices for hides and calf and kip skins. Prices for sole leather averaged higher and those for other leather manufactures did not change.

Continued advances in prices for raw silk, silk yarn, burlap, raw jute, and certain cotton textiles accounted for the increase of 0.9 percent in the textile products group index. Lower prices for broadcloth, drilling, duck, muslin, percale, brown sheeting, and ticking caused the cotton goods subgroup to decline 0.2 percent. A fractional advance was shown for the subgroup of woolen and worsted goods.

In the fuel and lighting materials group, higher prices were reported for anthracite, bituminous coal, and motor gasoline. The index for the group advanced 0.7 percent from April to May.

The metals and metal products group declined 0.5 percent because of lower prices for certain iron and steel items and nonferrous metals. Lower prices were reported for reinforcing bars, scrap steel, galvanized, automobile body, and steel sheets, sheet strips, electrolytic copper, pig lead, quicksilver, and copper and brass manufactures. Prices for 3–4-plow tractors, antimony, solder, and pig tin averaged lower.

The fractional decline in the building materials group was caused by lower prices for concrete blocks, common brick, oak, gum, and poplar lumber, linseed oil, turpentine, and gravel. Higher prices were reported for chestnut, redwood lumber, yellow pine flooring and timbers, China wood oil, rosin, prepared shingles and sand. The May index for the group, 89.5, was 1.0 percent below May 1938.

Slightly higher prices for certain fertilizer materials were more than offset by lower prices for copper sulphate, citric acid, tankage, and prepared fertilizer in the South Atlantic and South Central regions, with the result that the group index for chemicals and drugs declined 0.1 percent.

156184—39——16

In the housefurnishing goods group, higher prices for window shades and gas ranges caused an increase of 0.1 percent in the index.

Average wholesale prices of cattle feed dropped 5.1 percent during May. Paper and pulp declined 0.9 percent and crude rubber prices rose 2.7 percent. Prices for automobile tires and tubes and "Other miscellaneous commodities" showed no change between April and May.

Index numbers for the groups and subgroups of commodities for April and May 1939 and May 1938 are shown in table 1.

TABLE 1.—*Index Numbers of Wholesale Prices by Groups and Subgroups of Commodities*

[1926=100]

Group and subgroup	May 1939	April 1939	May 1938
All commodities	**76.2**	**76.2**	**78.1**
Farm products	**63.7**	**63.7**	**67.5**
Grains	59.6	55.2	62.3
Livestock and poultry	73.2	75.5	77.9
Other farm products	58.7	58.5	62.2
Foods	**68.2**	**68.6**	**72.1**
Dairy products	58.6	58.1	69.1
Cereal products	73.8	72.2	78.4
Fruits and vegetables	63.8	64.3	58.7
Meats	78.6	81.0	82.1
Other foods	61.4	61.6	65.4
Hides and leather products	**91.6**	**90.9**	**91.3**
Shoes	101.3	101.2	102.5
Hides and skins	72.1	68.3	63.4
Leather	83.1	82.8	82.1
Other leather products	95.6	95.6	102.4
Textile products	**67.5**	**66.9**	**66.1**
Clothing	81.7	81.6	82.2
Cotton goods	63.3	63.4	65.0
Hosiery and underwear	60.2	60.2	60.5
Silk and rayon	40.7	37.8	28.4
Woolen and worsted goods	75.4	75.2	76.0
Other textile products	65.3	64.9	65.3
Fuel and lighting materials	**73.9**	**73.4**	**76.2**
Anthracite	75.3	74.7	73.8
Bituminous coal	99.0	98.6	97.5
Coke	104.2	104.2	105.5
Electricity	(1)	(1)	86.4
Gas	86.0	84.1	88.3
Petroleum products	52.5	51.9	56.4
Metals and metal products	**93.5**	**94.0**	**96.7**
Agricultural implements	93.4	93.3	96.3
Farm machinery	94.6	94.6	97.8
Iron and steel	95.7	96.1	101.8
Metals—Continued.			
Motor vehicles [2]	93.0	93.4	95.8
Nonferrous metals	73.1	74.7	68.8
Plumbing and heating	79.3	79.3	77.2
Building materials	**89.5**	**89.6**	**90.4**
Brick and tile	91.7	93.0	90.5
Cement [3]	91.5	91.5	90.1
Lumber	91.2	91.5	89.3
Paint and paint materials	81.6	81.3	80.9
Plumbing and heating	79.3	79.3	77.2
Structural steel	107.3	107.3	114.9
Other building materials	89.6	89.7	94.1
Chemicals and drugs	**75.9**	**76.0**	**76.8**
Chemicals	79.4	79.3	81.2
Drugs and pharmaceuticals	71.9	71.9	72.8
Fertilizer materials	69.7	69.6	69.6
Mixed fertilizers	71.8	72.8	69.3
Housefurnishing goods	**85.5**	**85.4**	**87.2**
Furnishings	89.8	89.6	90.8
Furniture	81.0	81.0	83.6
Miscellaneous	**74.2**	**74.4**	**73.1**
Automobile tires and tubes	60.5	60.5	57.4
Cattle feed	87.4	92.1	78.6
Paper and pulp	80.4	81.1	86.9
Rubber, crude	34.2	33.3	24.2
Other miscellaneous	81.4	81.4	81.5
Raw materials	**68.9**	**68.5**	**70.7**
Semimanufactured articles	**74.3**	**74.4**	**75.4**
Finished products	**79.9**	**80.1**	**82.1**
All commodities other than farm products	**78.8**	**78.8**	**80.3**
All commodities other than farm products and foods	**80.6**	**80.5**	**81.6**

[1] Data not available.
[2] Preliminary revision.
[3] Preliminary revision. See pp. 11 and 12 of March 1939 Wholesale Prices.

Index Numbers by Commodity Groups, 1926 to May 1939

Index numbers of wholesale prices by commodity groups for selected years from 1926 to 1938, inclusive, and by months from May 1938 to May 1939, inclusive, are shown in table 2.

TABLE 2.—*Index Numbers of Wholesale Prices, by Groups of Commodities*

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
By years:											
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.2	94.3	82.6	95.3
1932	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.5	75.1	64.4	64.8
1933	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.6	75.8	62.5	65.9
1936	80.9	82.1	95.4	71.5	76.2	87.0	86.7	80.4	81.7	70.5	80.8
1937	86.4	85.5	104.6	76.3	77.6	95.7	95.2	83.9	89.7	77.8	86.3
1938	68.5	73.6	92.8	66.7	76.5	95.7	90.3	77.6	86.8	73.3	78.6
By months:											
1938:											
May	67.5	72.1	91.3	66.1	76.2	96.7	90.4	76.8	87.2	73.1	78.1
June	68.7	73.1	90.1	65.5	76.4	96.1	89.7	76.3	87.1	72.9	78.3
July	69.4	74.3	91.5	66.1	76.8	95.2	89.2	77.7	86.4	72.7	78.8
August	67.3	73.0	91.9	65.9	76.8	95.4	89.4	77.7	86.4	72.4	78.1
September	68.1	74.5	92.0	65.8	76.6	95.5	89.5	77.3	86.2	72.4	78.3
October	66.8	73.5	93.4	66.2	75.4	95.3	89.8	77.1	85.7	72.6	77.6
November	67.8	74.1	94.6	66.2	73.7	94.9	89.2	76.6	85.8	73.0	77.5
December	67.6	73.1	93.1	65.8	73.2	94.6	89.4	76.7	86.0	73.1	77.0
1939:											
January	67.2	71.5	93.1	65.9	72.8	94.4	89.5	76.7	85.4	73.2	76.9
February	67.2	71.5	91.9	66.1	73.0	94.3	89.6	76.3	85.2	73.5	76.9
March	65.8	70.2	91.8	66.6	73.1	94.3	89.8	76.5	85.2	74.1	76.7
April	63.7	68.6	90.9	66.9	73.4	94.0	89.6	76.0	85.4	74.4	76.2
May	63.7	68.2	91.6	67.5	73.9	93.5	89.5	75.9	85.5	74.2	76.2

The price trend for specified years and months since 1926 is shown in table 3 for the following groups of commodities: Raw materials, semimanufactured articles, finished products, commodities other than farm products, and commodities other than farm products and foods. The list of commodities included under the classifications "Raw materials," "Semimanufactured articles," and "Finished products" was given in the December 1938 issue of the Wholesale Price pamphlet.

TABLE 3.—*Index Numbers of Wholesale Prices, by Special Groups of Commodities*

[1926=100]

Year and month	Raw materials	Semimanufactured articles	Finished products	All commodities other than farm products	All commodities other than farm products and foods	Year and month	Raw materials	Semimanufactured articles	Finished products	All commodities other than farm products	All commodities other than farm products and foods
By years:						By months—Continued.					
1926	100.0	100.0	100.0	100.0	100.0	1938:					
1929	97.5	93.9	94.5	93.3	91.6	September	72.0	74.7	81.8	80.4	81.3
1932	55.1	59.3	70.3	68.3	70.2	October	70.9	75.9	81.1	79.9	81.1
1933	56.5	65.4	70.5	69.0	71.2	November	71.5	76.2	80.5	79.5	80.6
1936	79.9	75.9	82.0	80.7	79.6	December	70.9	75.2	80.2	79.0	80.3
1937	84.8	85.3	87.2	86.2	85.3	1939:					
1938	72.0	75.4	82.2	80.6	81.7	January	70.9	74.9	80.0	78.9	80.2
By months:						February	70.9	74.4	80.2	78.9	80.2
1938:						March	70.1	74.6	80.2	79.0	80.4
May	70.7	75.4	82.1	80.3	81.6	April	68.5	74.4	80.1	78.8	80.5
June	71.4	74.1	82.2	80.3	81.3	May	68.9	74.3	79.9	78.8	80.6
July	72.3	74.3	82.5	80.8	81.4						
August	71.4	74.4	81.8	80.3	81.4						

Weekly Fluctuations

Weekly fluctuations in the major commodity group classifications during April and May are shown by the index numbers in table 4.

TABLE 4.—*Weekly Index Numbers of Wholesale Prices by Commodity Groups, April and May 1939*

[1926=100]

Commodity group	May 27, 1939	May 20, 1939	May 13, 1939	May 6, 1939	Apr. 29, 1939	Apr. 22, 1939	Apr. 15, 1939	Apr. 8, 1939	Apr. 1, 1939
All commodities	75.8	75.9	76.4	76.1	76.1	76.0	75.8	75.9	76.5
Farm products	63.5	64.1	64.4	63.6	63.9	63.9	63.8	63.8	66.6
Foods	67.6	67.4	68.5	68.3	68.6	68.7	68.2	68.4	70.5
Hides and leather products	92.6	92.2	92.1	91.8	91.2	91.3	91.4	91.8	92.0
Textile products	67.1	67.0	67.0	66.8	66.6	66.7	66.2	66.1	66.0
Fuel and lighting materials	74.1	74.4	74.8	74.6	74.4	73.7	73.6	73.6	73.7
Metals and metal products	93.5	93.5	93.7	94.0	93.9	94.1	94.2	94.4	94.4
Building materials	89.4	89.3	89.6	89.6	89.4	89.8	89.7	89.9	90.0
Chemicals and drugs	75.7	75.7	75.7	75.7	75.8	75.8	75.9	75.9	76.0
Housefurnishing goods	86.9	86.9	86.8	86.8	86.6	86.5	86.5	86.5	86.5
Miscellaneous	73.7	73.7	74.3	74.3	74.7	74.2	74.0	73.9	73.9
Raw materials	68.5	69.0	69.4	68.6	68.6	68.3	68.0	68.3	70.2
Semimanufactured articles	74.1	74.0	74.3	74.4	74.1	74.4	74.4	74.5	74.6
Finished products	79.9	79.9	80.4	80.4	80.4	80.4	80.2	80.2	80.3
All commodities other than farm products	78.5	78.5	79.0	78.9	78.8	78.7	78.5	78.6	78.8
All commodities other than farm products and foods	80.7	80.7	81.0	80.9	80.8	80.7	80.5	80.6	80.7

Trend of Employment and Pay Rolls

SUMMARY OF REPORTS FOR MAY 1939

Total Nonagricultural Employment

APPROXIMATELY 180,000 more workers were employed in nonagricultural industries in May than in April. This increase was due largely to the return of approximately 95,000 bituminous-coal miners to jobs between mid-April and mid-May following the settlement of wage agreements, and in smaller measure, to employment gains in construction, public utilities, retail trade, and steam railroads. The increase since May of last year was 680,000 workers. These figures do not include emergency employment which decreased approximately 142,000 in May, as follows: Decreases of 161,000 on projects operated by the Works Progress Administration, 3,000 on work projects of the National Youth Administration, and an increase of 22,000 in the Civilian Conservation Corps, making a net decrease of 142,000.

Industrial and Business Employment

Employment increases from April to May were reported for 35 of the 87 manufacturing industries and 13 of the 16 nonmanufacturing industries surveyed monthly by the Bureau of Labor Statistics. Payroll gains were shown by 47 of the manufacturing and 15 of the nonmanufacturing industries.

There was a reduction since April of 80,000 workers, or 1.2 percent in the number employed in manufacturing industries. Corresponding weekly wage disbursements were nearly $1,000,000, or 0.6 percent less. The typical seasonal decline in factory employment between April and May is 0.6 percent while factory pay rolls ordinarily rise 0.2 percent. The greater-than-seasonal decline in factory employment in May is attributable in part to the recession in automobile employment, in which labor difficulties reduced operations in some localities, and to the employment losses in the shoe, women's clothing, and cotton-goods industries, in which the decreases were somewhat more pronounced than usual. The May employment index (90.1 percent of the 1923–25 average) was 8.0 percent higher than the corresponding index of last year, while the pay-roll index (84.4) was 15.8 percent higher.

The durable-goods group of industries as a whole showed an employment decline of 1.0 percent from April to May, while the nondurable-goods group reported a curtailment of 1.2 percent. Corresponding pay-roll declines were 0.9 percent and 0.4 percent, respectively. Compared with May of last year, employment in the durable-goods group showed a gain of 11.1 percent and pay rolls, a gain of 23.8 percent. In the nondurable-goods industries, the gains over the year interval were 5.7 percent and 8.8 percent, respectively.

Among the manufacturing industries showing larger than seasonal or contraseasonal gains in employment were aircraft (9.8 percent, or 2,900 workers), woolen and worsted goods (8.7 percent, or 10,700 workers), shipbuilding (5.1 percent, or 3,100 workers), meat packing (3.9 percent, or 4,600 workers), sawmills (3.7 percent, or 9,100 workers) and baking (2.4 percent, or 5,500 workers). Substantial increases of approximately seasonal proportions were shown in ice cream (14.9 percent), butter (6.1 percent), and beverages (4.5 percent). Seasonal declines were shown in establishments manufacturing fertilizers (29.9 percent, or 9,000 workers) and men's clothing (6.8 percent, or 12,900 workers). Larger than seasonal reductions were shown by factories manufacturing automobiles (8.3 percent, or 34,200 workers), shoes (8.6 percent, or 17,200 workers), women's clothing (6.6 percent, or 14,600 workers), cotton goods (1.8 percent, or 6,600 workers), steel (1.0 percent, or 4,100 workers), agricultural implements (5.1 percent, or 2,800 workers), and hardware (5.7 percent, or 2,400 workers). Reports from a number of firms indicated that plant operations were curtailed during the May 15th pay period because of a coal shortage. The unbroken expansion in employment and pay rolls in aircraft factories which began in the fall of 1938 continued in May, bringing the index to a new high. Employment in this industry in May was more than double the number employed in 1929. Shipbuilding employment, which has climbed each month since last August, reached a level of 118.0 percent of the 1923–1925 average in May, which was above that recorded in any month (except April 1937) since 1923.

Machine-tool employment, which likewise has risen each month since last August, reached the highest level since March of last year. Other industries for which the May employment indexes were at the highest levels since the latter months of 1937 were cast-iron pipe, engines, textile machinery, marble-granite-slate, corsets and allied garments, paper and pulp, and paints and varnishes.

Employment in retail trade increased 0.2 percent between April and May, while pay rolls rose 0.3 percent. These increases indicate the addition of 7,000 employees and a gain of $215,000 in weekly wages. Eliminating the effect of Easter trade, which affects the March and April levels according to the date of Easter, the current May figure, compared with February, shows a larger percentage gain

in employment than the average gain over these months for the preceding 10 years. The May 1939 employment index (85.7 percent of the 1929 average) was 2.3 percent higher than in May of last year, and the pay-roll index (71.5) rose 2.1 percent. Among the more important retail groups showing employment gains over the month interval were food, automotive, general merchandise, furniture, hardware, and lumber and building materials.

Wholesale-trade establishments reported a seasonal employment decline of 0.3 percent, or 3,200 workers. Pay rolls rose 0.1 percent over the month interval. Among the wholesale lines reporting fewer employees were dry goods and apparel, farm supplies, groceries and food, metals and minerals, and machinery, equipment, and supplies. The following wholesale lines showed gains in employment: Automotive, food products, hardware, paper and paper products, petroleum products, and lumber and building materials.

Employment in bituminous-coal mining increased 79.6 percent, and pay rolls were 8.9 percent higher. The mines affected by the shut-down pending the settlement of wage agreements did not generally resume operations until after May 15. As the pay-roll period for which reports are usually received by the Bureau of Labor Statistics is the one ending nearest May 15, the full effect of the resumption of operations is not reflected in the pay rolls reported to the Bureau for the May 15 pay period. Anthracite mining showed an employment decrease of 0.8 percent, but a pay-roll gain of 31.3 percent. The increase in pay rolls reflected increased production resulting from the greater demand for anthracite during the shut-down of the bituminous mines.

Metal mines reported a contraseasonal gain of 0.4 percent in employment. Crude petroleum showed a seasonal increase of 0.3 percent, and quarrying and nonmetallic mining a seasonal advance of 6.1 percent. Telephone and telegraph companies had 2.0 percent more employees on their rolls. Light and power companies reported 0.9 percent more workers, and electric railroads increased their forces by 0.6 percent. Employment in laundries and dyeing and cleaning establishments increased seasonally by 2.2 percent and 4.7 percent, respectively, and hotel employment gained 0.8 percent. Brokerage firms reduced their forces 1.4 percent, and insurance firms reported a gain of 0.3 percent.

Employment in private building construction increased 6.7 percent, according to reports from 14,441 contractors employing 133,648 workers in May. Corresponding pay rolls increased 11.9 percent. The marked advances in employment reported in the New England, the East North Central, and the West North Central States in April were continued in May with increases of 19.4 percent, 15.9 percent, and 16.6 percent, respectively. Gains of 6.9 percent and 5.6 percent,

respectively, were shown for the West South Central and Mountain States. Employment in the East South Central and South Atlantic States increased by 2.6 percent and 2.8 percent, respectively. In the Pacific States there was an increase of 1.4 percent, and in the Middle Atlantic States there was a 2.5 percent decrease, due largely to a 6.3 percent recession in New York. The reports on which the figures are based do not cover construction projects financed by the W. P. A., the P. W. A., and the R. F. C., or by regular appropriations of the Federal, State, or local Governments.

A preliminary report of the Interstate Commerce Commission showed a gain since April of 0.8 percent or 7.228 persons in the number employed by class I railroads. The total number employed in May was 957,580. Corresponding pay-roll figures were not available when this report was prepared. For April they were $144,962,740 as against $153,890,102 for March, a decrease of 5.8 percent.

TABLE 1.—*Employment, Pay Rolls, and Earnings in All Manufacturing Industries Combined and in Nonmanufacturing Industries, May 1939 (Preliminary Figures)*

Industry	Employment			Pay roll			Average weekly earnings		
	Index, May 1939	Percentage change from—		Index, May 1939	Percentage change from—		Average in May 1939	Percentage change from—	
		April 1939	May 1938		April 1939	May 1938		April 1939	May 1938
All manufacturing industries combined [1]	(*1923–25 =100*) 90.1	−1.2	+8.0	(*1923–25 =100*) 84.4	−0.6	+15.8	23.90	+0.6	+7.2
Class I steam railroads [2]	53.6	+.8	+5.7	([3])	([3])	([3])	([3])	([3])	([3])
Coal mining:	(*1929= 100*)			(*1929= 100*)					
Anthracite [4]	52.6	−.8	−.4	57.0	+31.3	+49.0	35.84	+32.3	+49.6
Bituminous [4]	46.6	+79.6	−43.4	19.3	+8.9	−65.1	9.54	−47.2	−38.5
Metalliferous mining	61.7	+.4	+4.9	53.7	+2.0	+4.9	27.72	+1.7	+([5])
Quarrying and nonmetallic mining	45.6	+6.1	+4.4	39.7	+10.6	+3.6	21.74	+4.2	−.8
Crude-petroleum producing	66.0	+.3	−9.8	61.2	+.6	−8.2	33.35	+.3	+1.8
Public utilities:									
Telephone and telgraph	75.6	+2.0	+.8	94.2	+2.2	+3.2	[6] 30.61	+.2	+2.4
Electric light and power and manufactured gas	91.1	+.9	−.7	98.9	+2.0	+1.5	[6] 34.03	+1.1	+2.2
Electric-railroad and motor-bus operation and maintenance	69.5	+.6	−1.6	70.1	+.7	−1.6	[6] 32.79	+.1	0
Trade:									
Wholesale	87.1	−.3	−.3	74.9	+.1	−.3	[6] 29.76	+.4	−([5])
Retail	85.7	+.2	+2.3	71.5	+.3	+2.1	[6] 21.61	+.1	−.1
General merchandising	97.0	+.2	+5.0	87.0	+.6	+3.1	[6] 18.36	+.4	−1.8
Other than general merchandising	82.7	+.3	+1.5	68.3	+.3	+1.9	[6] 24.13	−([5])	+.4
Hotels (year-round) [4] [7]	94.0	+.8	+.3	82.3	+.4	+2.2	[6] 15.00	−.4	+1.9
Laundries [4]	95.5	+2.2	−.7	83.9	+5.0	+3.7	18.07	+2.7	+4.4
Dyeing and cleaning [4]	107.0	+4.7	−2.7	83.0	+13.3	+2.9	21.12	+8.1	+5.7
Brokerage	([3])	−1.4	−2.8	([3])	−1.1	−.1	[6] 36.08	+.3	+2.8
Insurance	([3])	+.3	+.9	([3])	+.6	+2.9	[6] 36.82	+.3	+1.9
Building construction	([3])	+6.7	+4.3	([3])	+11.9	+13.4	31.40	+4.9	+8.2

[1] Revised indexes; adjusted to 1935 Census of Manufactures.
[2] Preliminary. Source: Interstate Commerce Commission.
[3] Not available.
[4] Indexes adjusted to 1935 census. Comparable series back to January 1929 presented in January 1938 issue of the pamphlet, Employment and Pay Rolls.
[5] Less than 1/10 of 1 percent.
[6] Average weekly earnings not strictly comparable with figures published in issues of the Monthly Labor Review dated earlier than April 1938 (except for the January figures appearing in the March issue), as they now exclude corporation officers, executives, and other employees whose duties are mainly supervisory.
[7] Cash payments only; the additional value of board, room, and tips cannot be computed.

Hours and earnings.—The average hours worked per week by wage earners in manufacturing industries were 36.7 in May, a gain of 0.7 percent since April. The average hourly earnings of these workers were 64.9 cents, a decrease of less than one-tenth of 1 percent as compared with the preceding month. Average weekly earnings rose 0.6 percent to $23.90.

Of the 14 nonmanufacturing industries for which man-hour data are available, 9 showed increases in average hours worked per week, and 5 showed gains in average hourly earnings. Fourteen of the 16 nonmanufacturing industries surveyed reported higher average weekly earnings.

Employment and pay-roll indexes, and average weekly earnings in May 1939 for all manufacturing industries combined, for selected nonmanufacturing industries, and for class I railroads, with percentage changes over the month and year intervals are presented in table 1.

Public Employment

During the month ending May 15, 1939, there were 273,600 men employed on projects financed from funds provided by the Public Works Administration, an increase of 24,800 over the number at work in April, and 150,500 more than were employed on these projects in May 1938. Pay rolls for the month were $22,755,000.

Employment on projects of the United States Housing Authority increased from 5,700 in April to 6,500 for the month ending May 15, and pay-roll disbursements rose from $689,000 in April to $783,000 in May. These figures cover new construction and demolition and pertain only to those projects started under the United States Housing Authority; those formerly under the Public Works Administration are shown under the Public Works Administration building construction projects in this report.

On projects financed from regular Federal appropriations the number of men employed increased from 190,600 to 216,700. Substantial gains occurred on public road projects, rural electrification, and dredging, dike, and revetment projects, while moderate increases were reported on the following types of projects: Reclamation, ship construction, streets and roads, locks and dams, and nonresidential building construction. Pay rolls increased from $19,150,000 in April to $21,812,000 for the month ending May 15.

There were over 2,300 men at work on projects financed by the Reconstruction Finance Corporation during the month ending May 15; pay-roll disbursements were $276,000.

As a result of further curtailment of work relief employment on projects operated by the Works Progress Administration, the number of persons employed declined from 2,629,000 in April to 2,468,000 in May. Compared with May 1938, the decrease in the number employed was 211,000. Pay rolls for May, amounting to $140,088,000,

were $6,300,000 lower than in April and $2,178,000 more than in May 1938. There was an increase in employment on Federal projects under The Works Program and a slight decrease on work projects of the National Youth Administration. Data on employment and pay rolls for Student Aid in May will not be available until next month.

There were 336,000 workers in camps of the Civilian Conservation Corps in May, 22,000 more than in April and 30,000 more than in May 1938. Of the total number in camps during May, 297,500 were enrollees, 5,000 Reserve officers, 300 nurses, 1,600 educational advisers, and 31,600 supervisory and technical employees.

In the regular services of the Federal Government increases in employment were reported in the executive, legislative, military, and judicial services. Of the 903,000 employees in the executive service in May, 123,000 were working in the District of Columbia and 780,000 outside the District. Force-account employees (employees who are on the Federal pay roll and are engaged on construction projects) were 8.8 percent of the total number of employees in the executive service. Increases in employment were reported in administrative offices of the War and Navy Departments, in the Department of Agriculture, and in the Department of the Interior. A decrease was reported in the administrative offices of the Works Progress Administration.

TABLE 2.—*Summary of Federal Employment and Pay Rolls, April and May 1939*[1]
(*Preliminary Figures*)

Class	Employment		Percentage change	Pay rolls		Percentage change
	May	April		May	April	
Federal services:						
Executive [2]	902,827	[3] 885,766	+1.9	$136,387,121	[3] $133,426,857	+2.2
Judicial	2,322	2,123	+9.4	607,732	503,895	+20.6
Legislative	5,336	5,315	+.4	1,219,849	1,214,714	+.4
Military	354,612	350,610	+1.1	26,438,718	26,731,905	−1.1
Construction projects:						
Financed by P. W. A.[4]	273,614	248,864	+9.9	22,754,996	20,141,196	+13.0
U. S. H. A. low-cost housing	6,473	5,681	+13.9	782,965	689,141	+13.6
Financed by R. F. C.[5]	2,336	2,255	+3.6	275,512	252,382	+9.2
Financed by regular Federal appropriations	216,716	190,581	+13.7	21,811,566	19,150,441	+13.9
Federal projects under The Works Program	147,925	119,692	+23.6	7,159,718	5,658,478	+26.5
Projects operated by W. P. A.	2,468,158	2,629,206	−6.1	140,088,103	146,388,042	−4.3
National Youth Administration:						
Work projects	223,892	227,113	−1.4	4,271,347	4,332,530	−1.4
Student Aid	[6]	383,344	.....	[6]	2,495,400	.....
Civilian Conservation Corps	335,902	314,343	+6.9	15,022,973	14,169,329	+6.0

[1] Includes data on projects financed wholly or partially from Federal funds.
[2] Includes force-account and supervisory and technical employees shown under other classifications to the extent of 113,003 employees and pay-roll disbursements of $14,257,035 for May 1939, and 107,824 employees and pay-roll disbursements of $13,628,527 for April 1939.
[3] Revised.
[4] Data covering P. W. A. projects financed from National Industrial Recovery Acts funds, Emergency Relief Appropriation Acts of 1935, 1936, and 1937 funds, and Public Works Administration Appropriation Act of 1938 funds are included. These data are not shown under The Works Program. Includes 21,200 wage earners and $1,979,241 pay roll for May 1939; 22,497 wage earners and $2,031,383 pay roll for April 1939, covering Public Works Administration projects financed from Emergency Relief Appropriation Acts of 1935, 1936, and 1937 funds. Includes 245,167 wage earners and $19,970,789 pay roll for May 1939; 219,034 wage earners and $17,159,655 pay roll for April 1939, covering Public Works Administration projects financed from funds provided by the Public Works Administration Appropriation Act of 1938.
[5] Includes 713 employees and pay-roll disbursements of $66,632 for May 1939; 682 employees and pay-roll disbursements of $58,225 for April 1939 on projects financed by the RFC Mortgage Co.
[6] Data not available.

Employment on State-financed road projects increased 9,800 in May. Of the 132,000 at work, approximately 16,000 were engaged in the construction of new roads and 116,000 on maintenance work. Pay-roll disbursements for both types of road work were $9,766,000.

A summary of Federal employment and pay-roll data for May 1939 is given in table 2.

DETAILED REPORTS FOR APRIL 1939

A MONTHLY report on employment and pay rolls is published as a separate pamphlet by the Bureau of Labor Statistics. This gives detailed data regarding employment, pay rolls, working hours, and earnings for the current month for industrial and business establishments and for the various forms of public employment. This pamphlet is distributed free upon request. Its principal contents for the month of April, insofar as industrial and business employment is concerned, are reproduced in this section of the Monthly Labor Review.

Industrial and Business Employment

Monthly data on employment and pay rolls are available for the following groups: 87 manufacturing industries; 16 nonmanufacturing industries, including private building construction; and class I steam railroads. The reports for the first two of these groups—manufacturing and nonmanufacturing—are based on sample surveys by the Bureau of Labor Statistics. The figures on class I steam railroads are compiled by the Interstate Commerce Commission and are presented in the foregoing summary.

EMPLOYMENT, PAY ROLLS, HOURS, AND EARNINGS

Employment and pay-roll indexes, as well as average hours worked per week, average hourly earnings, and average weekly earnings for February, March, and April 1939, where available, are presented in table 1. The February and March figures, where given, may differ in some instances from those previously published, because of revisions necessitated by the inclusion of late reports and other causes.

The average weekly earnings shown in table 1 are computed by dividing the total weekly pay rolls in the reporting establishments by the total number of full- and part-time employees reported. As all reporting establishments do not supply man-hours, average hours worked per week and average hourly earnings are necessarily based on data supplied by a smaller number of reporting firms. The size and composition of the reporting sample varies slightly from month to month. Therefore the average hours per week, average hourly earnings, and average weekly earnings shown are not strictly comparable from month to month. The sample, however, is believed to be

TABLE 1.—*Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries*

MANUFACTURING

[Indexes are based on 3-year average, 1923–25=100, and are adjusted to 1935 Census of Manufactures. Not comparable to indexes published in pamphlets prior to Aug. 1938. Comparable series available upon request]

Industry	Employment index			Pay-roll index			Average weekly earnings [1]			Average hours worked per week [1]			Average hourly earnings [1]		
	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939
													Cents	*Cents*	*Cents*
All manufacturing	**91.2**	**91.4**	**90.7**	**84.9**	**86.9**	**85.4**	**$23.82**	**$24.23**	**$24.06**	**36.4**	**37.1**	**36.9**	**64.5**	**65.1**	**64.9**
Durable goods	**84.1**	**83.5**	**82.6**	**80.2**	**80.1**	**78.4**	**26.98**	**27.10**	**26.85**	**36.5**	**36.7**	**36.4**	**72.6**	**72.7**	**72.6**
Nondurable goods	**98.0**	**98.9**	**98.4**	**90.2**	**94.6**	**93.1**	**20.93**	**21.61**	**21.49**	**36.4**	**37.5**	**37.3**	**58.2**	**58.6**	**58.6**
Durable goods															
Iron and steel and their products, not including machinery	**88.3**	**88.3**	**87.2**	**80.1**	**81.6**	**79.8**	**26.45**	**27.01**	**26.70**	**35.1**	**35.8**	**35.3**	**75.3**	**75.2**	**75.4**
Blast furnaces, steel works, and rolling mills	92.3	92.2	91.5	82.8	84.8	83.4	28.07	28.81	28.47	33.6	34.4	34.0	83.5	83.5	83.5
Bolts, nuts, washers, and rivets	90.0	91.9	91.8	83.0	92.3	94.7	23.53	25.64	26.33	33.9	36.9	37.9	69.5	69.5	69.6
Cast-iron pipe	67.4	66.8	65.7	58.5	55.4	55.4	20.71	19.80	20.06	35.4	33.7	34.3	58.2	58.0	57.8
Cutlery (not including silver and plated cutlery) and edge tools	84.7	84.4	82.9	74.2	76.7	74.4	22.17	22.94	22.65	37.6	38.7	38.3	59.8	60.0	59.9
Forgings, iron and steel	48.6	48.0	48.6	46.1	45.9	47.0	27.62	28.10	28.48	36.3	37.3	37.4	75.9	75.2	76.0
Hardware	80.7	83.0	83.2	76.7	81.9	78.9	23.05	23.93	23.04	35.2	36.6	35.4	65.5	65.5	65.1
Plumber's supplies	73.4	74.0	73.7	64.6	63.3	64.8	24.98	24.28	24.95	37.0	36.1	37.1	67.6	67.2	67.2
Stamped and enameled ware	135.3	137.4	131.3	131.8	137.0	128.8	23.34	23.92	23.55	36.9	38.1	37.6	63.0	62.7	62.5
Steam and hot water heating apparatus and steam fittings	68.8	69.1	68.2	56.0	56.2	57.1	24.52	24.56	25.24	35.2	36.0	36.3	69.7	68.2	69.5
Stoves	81.0	78.4	74.7	68.4	66.6	62.2	24.96	25.21	24.72	38.0	38.3	37.4	66.3	66.7	66.9
Structural and ornamental metalwork	66.9	66.2	64.0	59.5	57.6	54.6	28.06	27.54	26.93	38.4	37.7	37.0	73.1	73.1	72.9
Tin cans and other tinware	88.2	85.5	83.7	94.0	92.6	85.8	23.19	23.57	22.33	38.1	38.7	36.8	61.1	60.8	61.0
Tools (not including edge tools, machine tools, files, and saws)	84.5	85.4	84.7	81.6	84.2	83.9	23.95	24.45	24.45	39.1	40.0	39.9	61.4	61.4	61.5
Wirework	159.4	161.4	160.6	162.9	169.5	163.5	24.68	25.36	24.60	36.7	37.7	36.8	67.5	67.5	66.9
Machinery, not including transportation equipment	**95.1**	**94.7**	**93.4**	**93.8**	**94.2**	**91.7**	**27.48**	**27.67**	**27.27**	**37.7**	**38.0**	**37.6**	**72.6**	**72.8**	**72.5**
Agricultural implements (including tractors)	123.8	124.8	121.5	134.9	136.7	131.9	30.00	30.19	29.96	37.9	37.8	37.5	79.5	80.3	80.4
Cash registers, adding machines, and calculating machines	129.9	133.3	133.6	119.8	120.3	119.6	29.81	29.17	28.93	36.7	35.9	35.7	81.8	82.0	81.9
Electrical machinery, apparatus, and supplies	86.1	85.2	83.6	85.7	86.5	83.5	27.57	28.09	27.63	37.2	37.8	37.3	74.2	74.5	74.3
Engines, turbines, water wheels, and windmills	96.3	93.8	90.6	115.1	112.1	106.9	30.94	30.92	30.50	39.5	39.5	39.0	78.8	78.8	78.7
Foundry and machine-shop products	84.5	84.1	83.4	78.9	79.5	78.0	26.79	27.02	26.69	37.6	37.8	37.5	71.2	71.5	71.1
Machine tools	131.2	128.4	125.1	140.8	135.0	131.2	30.46	29.83	29.75	40.9	40.2	39.9	74.6	74.2	74.6
Radios and phonographs	94.6	98.9	102.5	80.8	85.1	87.7	21.19	21.14	21.15	36.2	36.6	36.7	58.6	57.8	57.7

Engines, turbines, water wheels, and windmills	96.3	93.8	90.6	115.1	112.1	106.9	30.94	30.92	30.50	39.5	39.5	39.0	78.8	78.8	78.7
Foundry and machine-shop products	84.5	84.1	83.4	78.9	79.5	78.0	26.79	27.02	26.69	37.6	37.8	37.5	71.2	71.5	71.1
Machine tools	131.2	128.4	125.1	140.8	135.0	131.2	30.46	29.83	29.75	40.9	40.2	39.9	74.6	74.2	74.6
Radios and phonographs	94.6	98.9	102.5	80.8	85.1	87.7	21.19	21.14	21.15	36.2	36.6	36.7	58.6	57.8	57.7
Textile machinery and parts	72.0	70.3	69.9	71.4	69.4	68.1	25.79	25.68	25.32	38.8	39.0	38.2	66.6	65.9	66.5
Typewriters and parts	128.2	127.6	125.4	134.2	136.2	122.5	25.13	25.63	23.45	38.5	39.0	36.6	65.3	65.7	64.1
Transportation equipment	**95.4**	**95.7**	**95.9**	**94.4**	**92.0**	**91.8**	**31.88**	**30.81**	**30.69**	**35.7**	**34.6**	**34.3**	**89.6**	**89.8**	**89.7**
Aircraft	1,078.4	961.7	940.9	1,063.7	989.1	961.3	30.09	31.38	31.18	40.8	42.1	41.8	74.6	76.1	75.8
Automobiles	102.1	103.8	104.4	99.5	97.0	97.3	32.47	30.87	30.80	35.1	33.3	33.3	92.5	92.6	92.4
Cars, electric- and steam-railroad	33.1	33.4	34.3	31.5	32.3	32.6	26.06	26.44	26.00	34.6	35.4	35.5	75.3	74.8	73.2
Locomotives	19.1	16.5	17.5	16.2	13.7	13.2	27.14	26.67	24.22	35.2	34.4	31.5	77.1	77.5	76.9
Shipbuilding	112.3	108.7	106.6	117.3	115.5	112.9	31.22	31.78	31.65	37.6	37.9	37.6	83.1	83.8	83.3
Nonferrous metals and their products	**93.4**	**94.3**	**93.6**	**86.2**	**89.5**	**88.3**	**24.89**	**25.67**	**25.48**	**37.1**	**38.3**	**38.3**	**66.8**	**66.9**	**66.5**
Aluminum manufactures	154.6	153.1	145.3	160.6	159.8	152.1	26.56	26.68	26.77	38.8	39.5	39.3	68.4	67.6	68.1
Brass, bronze, and copper products	98.4	99.2	98.8	95.9	98.6	96.4	26.43	26.98	26.42	37.6	38.3	37.6	70.4	70.5	70.4
Clocks and watches, and time-recording devices	83.7	83.6	83.6	84.1	85.5	88.0	21.24	21.63	22.25	36.2	37.1	38.0	58.7	58.3	58.5
Jewelry	90.4	92.7	92.3	71.1	76.9	76.1	21.90	23.03	22.82	36.7	39.3	39.2	59.1	57.9	57.4
Lighting equipment	82.9	87.5	89.0	70.9	80.3	82.7	22.85	25.82	26.13	33.4	35.9	37.6	68.3	71.8	69.5
Silverware and plated ware	66.3	66.7	65.3	59.4	64.7	60.7	24.61	26.64	25.56	39.0	41.4	40.1	63.4	64.8	64.1
Smelting and refining—copper, lead, and zinc	72.0	71.5	71.9	66.2	66.6	67.1	25.90	26.23	26.27	37.5	37.8	37.9	69.1	69.1	69.0
Lumber and allied products	**64.3**	**62.6**	**62.6**	**55.7**	**53.9**	**53.0**	**20.08**	**20.02**	**19.80**	**37.7**	**37.9**	**37.9**	**53.9**	**53.3**	**52.5**
Furniture	77.9	78.9	78.8	63.5	66.1	66.0	19.74	20.20	20.26	37.3	38.5	38.8	53.2	52.7	52.3
Lumber:															
Millwork	54.2	53.4	53.3	43.9	43.7	43.5	21.40	21.65	21.64	39.7	39.9	40.0	54.0	54.4	54.2
Sawmills	51.8	49.1	49.1	46.3	42.4	41.1	19.94	19.34	18.83	37.5	37.0	36.7	54.2	53.3	52.3
Stone, clay, and glass products	**72.7**	**69.6**	**66.6**	**62.6**	**61.7**	**58.0**	**22.96**	**23.72**	**23.43**	**35.5**	**36.2**	**35.7**	**64.8**	**65.1**	**64.8**
Brick, tile, and terra cotta	53.6	49.7	48.1	39.6	37.2	35.6	19.46	19.59	19.47	36.4	36.1	36.1	53.5	54.4	54.2
Cement	66.5	60.3	54.9	61.9	55.5	48.9	25.91	25.56	24.94	37.6	36.9	36.1	68.9	69.2	69.1
Glass	91.9	90.6	89.5	89.4	95.3	93.3	23.37	25.30	25.04	33.1	35.4	34.8	70.7	71.6	72.0
Marble, granite, slate, and other products	47.2	44.8	37.7	38.8	34.3	26.5	27.55	25.92	23.68	37.0	36.3	34.6	74.9	71.8	68.8
Pottery	81.6	81.2	80.0	72.2	73.7	72.3	22.82	23.38	23.46	36.5	37.5	37.2	63.1	63.2	62.9
Nondurable goods															
Textiles and their products	**98.6**	**101.4**	**101.2**	**79.8**	**89.0**	**87.8**	**16.36**	**17.38**	**17.35**	**34.7**	**36.2**	**36.1**	**47.9**	**49.1**	**48.9**
Fabrics	88.8	91.2	92.1	73.9	79.4	81.2	15.87	16.56	16.81	35.4	36.6	37.0	45.7	46.2	46.1
Carpets and rugs	83.7	84.6	82.7	70.7	75.3	71.5	22.52	23.64	22.94	35.6	37.4	36.6	63.4	63.3	62.7
Cotton goods	86.7	87.7	87.9	73.2	75.7	76.0	13.72	14.06	14.08	35.6	36.5	36.6	38.4	38.5	38.4
Cotton small wares	83.7	86.3	85.7	76.1	82.6	83.0	17.34	18.21	18.48	38.8	39.5	39.9	45.5	46.8	47.0
Dyeing and finishing textiles	114.4	116.0	116.6	97.0	101.0	102.1	20.64	21.22	21.39	38.1	39.3	39.6	53.9	53.4	53.8
Hats, fur-felt	80.8	82.8	85.7	55.7	71.2	82.2	17.48	22.07	24.75	25.0	30.6	35.5	69.5	69.5	71.4
Knit goods	114.9	116.0	114.1	112.4	119.4	118.7	17.27	18.03	18.26	35.6	37.0	37.1	49.4	50.0	50.2
Hosiery	147.2	148.5	146.4	154.3	165.3	164.4	18.40	19.38	19.63	35.5	37.0	37.0	52.2	53.0	53.2
Knitted outerwear	72.1	75.5	72.9	63.6	68.3	68.2	16.32	16.89	17.72	35.5	36.8	37.2	46.1	45.9	47.2
Knitted underwear	73.5	72.4	71.5	64.7	64.9	63.8	14.77	15.05	14.98	36.2	36.9	37.0	41.0	41.0	40.7
Knitted cloth	150.2	153.3	151.7	112.4	120.6	121.0	16.68	17.53	17.83	35.9	37.6	38.2	45.9	46.3	46.6
Silk and rayon goods	62.0	63.8	64.3	48.7	52.7	53.2	15.02	15.93	15.97	35.2	37.5	37.6	42.3	42.1	42.2
Woolen and worsted goods	69.0	76.8	82.9	52.3	61.9	69.8	17.54	18.66	19.50	33.3	35.3	36.8	52.7	52.9	53.0
Wearing apparel	119.0	123.0	120.1	88.8	104.8	97.7	17.84	19.91	19.03	33.7	35.7	34.5	51.7	54.1	53.9
Clothing, men's	103.8	106.6	104.8	74.3	86.2	80.2	18.85	21.07	20.07	32.6	35.1	33.7	57.7	59.9	59.2
Clothing, women's	171.1	178.5	172.9	118.0	143.4	134.8	18.86	21.51	20.81	33.8	35.6	34.4	51.6	54.6	55.1
Corsets and allied garments	106.1	103.7	102.3	111.2	108.9	106.3	17.58	17.61	17.45	38.7	39.3	38.6	45.4	45.1	45.5

See footnotes at end of table.

TABLE 1.—*Employment, Pay Rolls, Hours, and Earnings in Manufacturing and Nonmanufacturing Industries*—Continued

MANUFACTURING—Continued

Industry	Employment index			Pay-roll index			Average weekly earnings			Average hours worked per week			Average hourly earnings		
	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939	April 1939	March 1939	February 1939
Nondurable goods—Continued															
Textiles and their products—Continued.															
Wearing apparel—Continued.													*Cents*	*Cents*	*Cents*
Men's furnishings	132.3	137.1	137.6	109.9	122.2	123.8	$12.96	$14.20	$14.22	34.3	36.3	36.6	36.5	37.6	35.9
Millinery	77.7	83.4	77.7	63.9	89.6	71.1	21.70	27.80	23.35	32.3	39.2	35.3	62.9	67.9	65.3
Shirts and collars	119.3	121.5	119.6	102.6	106.9	103.3	13.44	13.69	13.49	35.1	35.2	34.8	38.9	39.6	39.6
Leather and its manufactures	**94.0**	**97.6**	**96.7**	**74.5**	**83.2**	**83.3**	**18.73**	**20.12**	**20.19**	**34.4**	**38.2**	**39.1**	**51.8**	**51.7**	**52.0**
Boots and shoes	94.5	98.5	97.2	70.1	80.1	79.6	17.58	19.17	19.13	33.6	38.0	39.1	49.2	49.2	48.8
Leather	84.5	86.0	86.9	83.7	87.7	89.8	23.83	24.47	24.88	37.8	38.9	39.4	62.9	63.0	63.4
Food and kindred products	**114.0**	**112.0**	**111.0**	**114.0**	**113.9**	**112.1**	**24.57**	**25.00**	**24.83**	**39.4**	**40.1**	**39.8**	**62.7**	**62.9**	**63.2**
Baking	142.0	142.1	141.5	135.7	138.0	136.6	25.11	25.52	25.40	41.1	41.8	41.6	61.3	61.5	61.5
Beverages	235.7	227.8	223.7	284.1	265.2	254.8	33.15	32.15	31.69	38.8	37.8	37.2	86.2	85.8	85.9
Butter	95.6	92.0	90.5	82.1	79.3	79.1	22.33	22.47	22.52	46.2	46.0	45.7	48.3	48.8	49.2
Canning and preserving	92.8	78.8	72.2	81.0	74.0	70.2	16.13	17.13	17.75	34.0	35.5	35.6	48.9	49.4	51.5
Confectionery	72.3	77.5	77.3	67.2	75.0	75.7	17.27	17.96	18.15	35.3	37.0	37.3	48.4	48.5	48.4
Flour	75.3	76.8	75.7	72.6	74.4	71.3	24.96	25.13	24.57	41.5	41.9	40.6	59.8	59.8	60.0
Ice cream	75.8	69.8	67.8	65.7	61.2	59.3	29.22	29.47	29.52	46.5	46.0	45.4	62.5	63.4	64.4
Slaughtering and meat packing	91.8	92.5	94.6	99.5	100.6	101.3	27.23	27.32	26.98	39.3	39.8	39.5	69.4	68.9	68.4
Sugar, beet	43.5	39.2	41.5	45.6	43.9	46.9	26.94	28.85	29.11	37.0	40.1	40.3	76.5	75.7	74.5
Sugar refining, cane	93.9	88.3	85.3	85.1	85.8	71.8	24.42	26.21	22.67	38.7	40.8	35.0	63.0	64.2	64.8
Tobacco manufactures	**61.8**	**59.5**	**62.4**	**53.0**	**51.5**	**50.9**	**16.05**	**16.22**	**15.19**	**34.0**	**34.2**	**32.0**	**47.5**	**47.4**	**47.4**
Chewing and smoking tobacco and snuff	60.7	60.6	61.4	62.8	66.5	63.8	16.63	17.18	16.28	32.7	33.9	32.4	51.1	51.0	50.4
Cigars and cigarettes	61.9	59.4	62.5	51.7	49.6	49.3	15.96	15.98	14.91	34.1	34.2	32.0	47.0	46.9	47.0
Paper and printing	**105.9**	**105.9**	**105.9**	**103.3**	**104.2**	**102.3**	**28.08**	**28.37**	**27.89**	**38.1**	**38.3**	**37.9**	**77.0**	**77.1**	**76.8**
Boxes, paper	100.4	101.6	99.7	103.8	107.1	103.5	21.13	21.54	21.24	39.2	39.8	39.2	54.6	54.6	54.7
Paper and pulp	106.3	105.9	106.3	104.6	105.5	105.1	24.11	24.43	24.16	39.4	39.8	39.6	61.2	61.4	61.1
Printing and publishing:															
Book and job	99.9	100.3	101.3	90.2	92.0	90.0	30.01	30.55	29.58	38.0	38.2	37.5	80.5	81.1	80.2
Newspapers and periodicals	106.5	106.0	105.2	108.9	108.1	106.1	37.66	37.65	37.30	36.3	36.2	36.0	99.8	99.4	99.6
Chemicals and allied products, and petroleum refining	**114.9**	**114.4**	**112.1**	**120.5**	**121.6**	**119.9**	**27.91**	**28.43**	**28.55**	**38.2**	**38.5**	**38.2**	**73.2**	**73.4**	**74.2**
Petroleum refining	116.1	116.3	116.4	128.5	131.5	132.4	34.39	35.20	35.23	35.6	36.3	36.5	97.3	97.3	97.0
Other than petroleum refining	114.6	114.0	111.1	118.0	118.6	116.0	25.27	25.70	25.75	39.1	39.3	38.8	65.0	65.0	66.1
Chemicals	114.9	116.5	116.1	127.9	130.9	129.6	30.81	31.08	30.89	39.5	39.9	39.7	78.0	78.0	78.0
Cottonseed—oil, cake, and meal	73.5	88.1	85.3	60.3	73.6	69.4	12.75	12.93	12.57	42.2	43.9	41.7	29.9	29.1	29.7
Druggists' preparations	107.6	108.0	107.6	119.4	119.1	117.9	25.05	24.86	24.73	39.1	39.2	39.2	60.7	59.3	59.6
Explosives	80.8	81.3	80.8	89.5	91.5	92.6	30.57	30.96	31.52	37.7	38.5	39.1	81.1	80.4	80.6
Fertilizers	160.2	132.2	98.0	137.3	105.6	77.1	15.84	14.76	14.63	40.2	37.4	34.6	39.4	39.5	42.3

Fertilizers	160.2	132.2	98.0	137.3	105.6	77.1	15.84	14.76	14.63	40.2	37.4	34.6	39.4	39.5	42.3
Paints and varnishes	117.6	114.9	112.5	123.2	120.4	115.7	28.24	28.30	27.84	40.7	40.6	40.0	69.7	69.8	69.7
Rayon and allied products	315.4	316.9	319.1	304.4	313.4	314.4	23.64	24.24	24.15	36.5	37.7	37.7	64.7	64.3	64.0
Soap	88.4	90.5	89.7	91.2	92.5	91.2	29.28	29.01	28.87	39.2	39.4	39.1	74.9	73.9	74.0
Rubber products	**82.1**	**82.8**	**81.5**	**83.0**	**85.4**	**83.0**	**27.00**	**27.40**	**27.28**	**35.7**	**36.1**	**36.0**	**76.1**	**76.5**	**76.0**
Rubber boots and shoes	60.0	61.7	60.7	58.6	58.8	59.8	22.23	21.65	22.05	37.1	35.9	37.7	59.9	60.3	58.4
Rubber tires and inner tubes	67.2	67.2	66.1	73.6	76.1	72.9	31.48	32.54	31.68	33.3	34.0	33.2	94.7	95.7	95.3
Rubber goods other	132.3	134.0	131.9	126.9	130.4	127.9	22.62	22.91	22.88	38.0	38.6	38.5	60.2	59.9	59.9

NONMANUFACTURING

[Indexes are based on 12-month average, 1929=100]

													Cents	*Cents*	*Cents*
Coal mining:															
Anthracite [2]	53.2	51.7	52.2	45.3	34.2	45.2	26.95	21.55	28.20	29.3	23.3	30.9	91.4	92.0	92.0
Bituminous [2]	26.2	87.4	88.6	17.9	77.8	81.2	18.09	23.49	24.29	21.5	26.5	27.6	88.7	88.4	88.4
Metalliferous mining	61.5	61.0	60.9	52.6	53.6	53.4	27.03	27.66	27.38	39.1	40.2	39.9	69.5	69.3	69.0
Quarrying and nonmetallic mining	43.0	40.1	37.9	35.9	33.1	29.7	21.11	20.80	19.52	37.9	37.5	35.4	55.4	55.4	55.6
Crude-petroleum producing	65.9	66.2	66.4	60.8	61.3	62.7	33.98	34.00	34.70	38.1	38.7	38.7	87.4	86.3	87.5
Public utilities:															
Telephone and telegraph [3]	74.1	73.4	73.3	92.1	91.9	91.7	30.81	30.96	31.09	39.0	38.9	38.9	81.7	82.2	82.6
Electric light and power and manufactured gas [3]	90.3	89.6	89.6	97.0	96.8	96.4	33.47	33.82	33.67	39.1	39.8	39.5	85.5	85.4	85.4
Electric-railroad and motorbus operation and maintenance [3]	69.1	69.5	69.3	69.6	70.5	69.9	32.83	33.12	32.87	45.6	45.7	45.4	71.2	71.5	71 5
Trade:															
Wholesale [3]	87.3	87.4	87.9	74.8	74.7	74.6	29.75	29.62	29.54	41.6	42.0	41.5	71.9	70.7	71.1
Retail [3]	85.5	83.8	81.5	71.3	69.6	68.4	21.29	21.28	21.55	42.4	42.5	42.7	54.8	54.8	54.9
General merchandising [3]	96.9	93.2	88.8	86.6	83.4	81.0	17.86	17.84	18.19	39.0	39.0	39.2	48.4	48.2	48.3
Other than general merchandising [3]	82.5	81.3	79.6	68.1	66.8	65.8	24.25	24.18	24.34	43.5	43.5	43.8	56.7	56.7	56.8
Hotels (year-round) [2 3 4]	93.2	92.7	92.6	81.9	81.1	82.8	15.01	15.09	15.29	46.6	46.7	46.9	31.7	31.7	32.1
Laundries [3]	93.5	92.9	92.8	79.9	79.3	78.6	17.57	17.54	17.32	42.2	42.3	42.2	42.1	41.7	41.3
Dyeing and cleaning [3]	102.2	95.4	92.1	73.3	67.7	63.2	19.71	19.48	18.95	41.0	41.1	39.7	49.2	49.2	48.6
Brokerage [3 5]	−.3	−1.2	−.8	−1.3	−1.0	−.6	36.26	36.30	35.71	(6)	(6)	(6)	(6)	(6)	(6)
Insurance [3 5]	+.1	+.2	(7)	+.6	+1.0	−1.1	36.71	36.32	36.11	(6)	(6)	(6)	(6)	(6)	(6)
Building construction [5]	+10.8	+6.4	−2.5	+14.9	+13.4	−6.1	29.92	28.98	27.38	31.2	30.4	29.1	96.2	95.5	94.3

[1] Average weekly earnings are computed from figures furnished by all reporting establishments. Average hours and average hourly earnings are computed from data supplied by a smaller number of establishments, as all reporting firms do not furnish man-hours. The figures are not strictly comparable from month to month because of changes in the size and composition of the reporting sample. Hours and earnings for all manufacturing industries now relate to 87 industries instead of 89 which were covered in the July and prior issues of the pamphlet. The 2 industries excluded are electric- and steam-railroad repair shops. The averages for the durable-goods group have also been affected by this exclusion.

[2] Indexes adjusted to 1935 census. Comparable series back to January 1929 presented in January 1938 issue of this publication.

[3] Average weekly earnings, hourly earnings, and hours not strictly comparable with figures published in pamphlets prior to January 1938 as they now exclude corporation officers, executives, and other employees whose duties are mainly supervisory.

[4] Cash payments only; the additional value of board, room, and tips cannot be computed.

[5] Indexes of employment and pay rolls are not available, percentage changes from preceding month substituted.

[6] Not available.

[7] Less than 1/10 of 1 percent.

sufficiently adequate in virtually all instances to indicate the general movements of earnings and hours over the period shown. The changes from the preceding month, expressed as percentages, are based on identical lists of firms for the 2 months, but the changes from April 1938 are computed from chain indexes based on the month-to-month percentage changes.

INDEXES OF EMPLOYMENT AND PAY ROLLS, APRIL 1938 THROUGH APRIL 1939

Indexes of employment and pay rolls are given in table 2 for all manufacturing industries combined, for the durable- and nondurable-goods groups of manufacturing industries, and for each of 13 nonmanufacturing industries, including 2 subgroups under retail trade, by months from April 1938 to April 1939, inclusive. The accompanying chart indicates the trend of factory employment and pay rolls from January 1919 to April 1939.

The indexes of factory employment and pay rolls are based on the 3-year average 1923–25 as 100. They relate to wage earners only and are computed from reports supplied by representative manufacturing establishments in 87 manufacturing industries. These reports cover more than 55 percent of the total wage earners in all manufacturing industries of the country and more than 65 percent of the wage earners in the 87 industries included in the monthly survey of the Bureau of Labor Statistics.

The indexes for the nonmanufacturing industries are based on the 12-month average for 1929 as 100. Figures for mining, laundries, and dyeing and cleaning cover wage earners only, but the figures for public utilities, trade, and hotels relate to all employees except corporation officers, executives, and other employees whose duties are mainly supervisory. For crude-petroleum producing they cover wage earners and clerical field force. The coverage of the reporting samples for the various nonmanufacturing industries ranges from 25 percent for wholesale trade to 90 percent for quarrying and nonmetallic mining.

Data for both manufacturing and nonmanufacturing industries are based on reports of the number of employees and amount of pay rolls for the pay period ending nearest the 15th of the month.

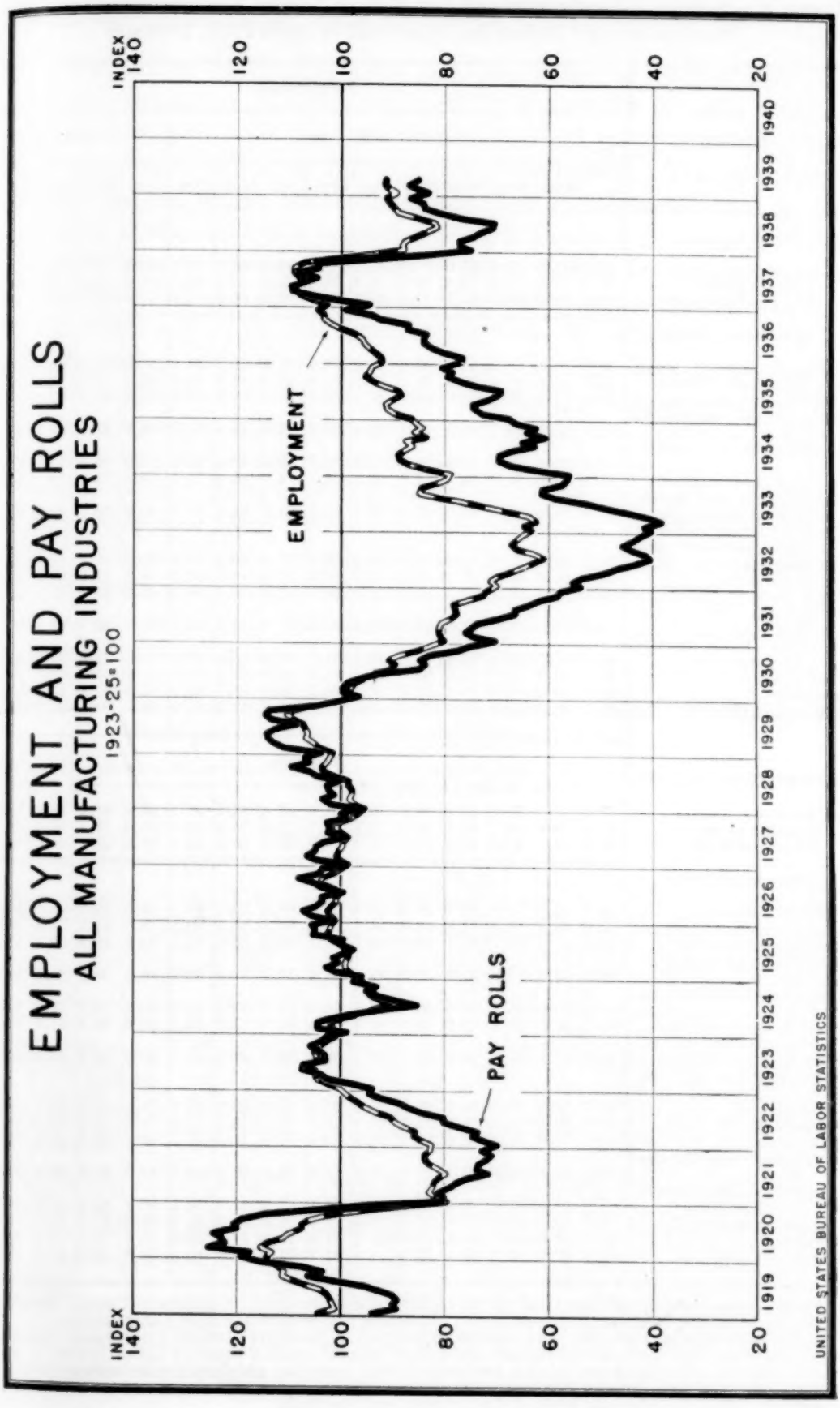
EMPLOYMENT AND PAY ROLLS
ALL MANUFACTURING INDUSTRIES
1923-25=100
INDEX
140
120
100
80
60
40
20
EMPLOYMENT
PAY ROLLS
1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940
UNITED STATES BUREAU OF LABOR STATISTICS

TABLE 5.—*Indexes of Employment and Pay Rolls in Selected Manufacturing [1] and Nonmanufacturing [2] Industries, April 1938 to April 1939, Inclusive*

Industry	Av. 1938	1938									1939			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Employment														
Manufacturing														
All industries	86.8	85.7	83.4	81.6	81.9	85.7	88.8	89.5	90.5	91.2	89.5	90.7	91.4	91.2
Durable goods [3]	77.3	77.0	75.0	72.4	70.3	71.7	75.3	79.0	82.1	83.1	81.6	82.6	83.5	84.1
Nondurable goods [4]	96.0	94.0	91.5	90.3	92.9	99.0	101.7	99.4	98.4	98.8	97.1	98.4	98.9	98.0
Nonmanufacturing														
Anthracite mining	52.3	57.0	52.8	56.0	44.6	37.6	46.4	52.4	51.0	51.3	50.0	52.2	51.7	53.2
Bituminous-coal mining	86.7	85.8	82.2	80.2	78.5	80.1	83.4	87.2	88.6	89.3	88.7	88.6	87.4	26.2
Metalliferous mining	59.0	61.6	58.8	56.0	49.7	51.4	55.2	57.9	61.9	62.3	62.6	60.9	61.0	61.5
Quarrying and nonmetallic mining	42.3	41.7	43.7	43.6	44.1	44.6	44.6	44.4	44.4	41.4	38.3	37.9	40.1	43.0
Crude-petroleum producing	72.1	73.8	73.2	72.8	72.3	72.4	71.5	69.5	68.3	67.8	67.0	66.4	66.1	65.9
Telephone and telegraph	75.1	74.8	75.0	74.8	74.9	74.8	74.9	74.7	74.4	74.3	74.1	73.3	73.4	74.1
Electric light and power, and manufactured gas	92.3	91.8	91.7	92.2	92.3	92.7	92.5	92.5	91.9	91.4	90.0	89.6	89.6	90.3
Electric-railroad and motorbus operation and maintenance	70.3	71.1	70.6	70.4	70.1	69.5	69.3	69.9	69.5	69.4	69.2	69.3	69.5	69.1
Wholesale trade	88.8	88.5	87.3	87.2	86.8	87.6	88.5	89.1	89.8	90.0	88.3	87.9	87.4	87.3
Retail trade	85.2	88.2	83.8	83.6	81.1	80.0	84.7	85.9	86.9	98.1	82.2	81.5	83.8	85.5
General merchandising	98.0	101.0	92.4	91.9	87.9	86.4	97.0	99.4	104.5	144.1	90.7	88.8	93.2	96.9
Other than general merchandising	81.8	84.9	81.5	81.4	79.3	78.3	81.5	82.3	82.3	86.0	80.0	79.6	81.3	82.5
Year-round hotels	92.7	93.5	93.7	92.2	90.7	90.4	91.8	92.9	92.5	92.0	91.8	92.6	92.7	93.2
Laundries	95.7	95.4	96.2	96.6	97.8	97.5	96.5	94.4	93.7	93.4	93.3	92.8	92.9	93.5
Dyeing and cleaning	104.3	111.8	109.9	110.8	108.6	105.0	107.8	106.8	102.5	97.9	94.2	92.1	95.4	102.2
Pay rolls														
Manufacturing														
All industries	77.5	74.6	72.9	70.8	70.6	76.9	81.0	83.8	84.1	86.5	83.4	85.4	86.9	84.9
Durable goods [3]	68.2	65.6	64.2	61.7	58.6	63.7	68.7	75.2	78.3	80.4	76.6	78.4	80.1	80.2
Nondurable goods [4]	88.0	84.7	82.6	80.9	84.1	91.7	94.9	93.4	90.6	93.4	91.0	93.1	94.6	90.2
Nonmanufacturing														
Anthracite mining	38.2	39.0	38.3	49.7	20.2	20.0	29.4	43.4	36.2	42.5	38.0	45.2	34.2	45.3
Bituminous-coal mining	67.9	56.3	55.3	57.0	56.8	64.2	71.9	78.3	81.4	80.9	78.2	81.2	77.8	17.9
Metalliferous mining	50.4	53.3	51.2	46.1	38.0	43.7	46.1	49.2	52.3	54.1	55.3	53.4	53.6	52.6
Quarrying and nonmetallic mining	35.1	33.9	38.3	37.3	37.0	39.2	38.4	39.2	37.2	33.7	30.2	29.7	33.1	35.9
Crude-petroleum producing	66.5	68.0	66.7	67.6	66.7	66.8	66.5	63.7	63.3	62.5	60.9	62.7	61.3	60.8
Telephone and telegraph	92.1	91.6	91.3	90.9	90.9	91.3	92.6	95.3	93.0	92.5	92.0	91.7	91.9	92.1
Electric light and power, and manufactured gas	98.5	97.6	97.4	98.6	98.3	98.9	98.4	99.9	98.6	98.2	95.9	96.4	96.8	97.0
Electric-railroad and motorbus operation and maintenance	69.7	70.0	71.2	69.7	69.0	69.5	68.4	68.9	68.8	69.7	71.1	69.9	70.5	69.6
Wholesale trade	74.7	74.6	75.1	73.8	73.6	73.7	74.3	75.1	75.4	75.7	75.5	74.6	74.7	74.8
Retail trade	70.4	72.2	70.0	69.5	68.1	66.8	69.4	70.8	71.5	79.2	69.7	68.4	69.6	71.3
General merchandising	87.8	89.4	84.4	84.3	80.4	78.8	85.3	88.3	91.8	122.9	84.0	81.0	83.4	86.6
Other than general merchandising	66.8	68.6	67.0	66.4	65.6	64.3	66.1	67.2	67.3	70.1	66.7	65.8	66.8	68.1
Year-round hotels	80.3	80.5	80.5	79.6	77.4	77.4	78.9	80.8	81.3	81.1	80.2	82.8	81.1	81.9
Laundries	80.6	80.6	80.9	81.8	83.0	83.1	81.4	79.5	79.3	80.0	79.6	78.6	79.3	79.9
Dyeing and cleaning	75.3	87.2	80.7	83.3	77.5	74.3	81.7	78.0	73.9	68.3	65.8	63.2	67.7	73.3

[1] 3-year average, 1923–25=100—adjusted to 1935 Census of Manufactures. Comparable indexes for earlier months are in August 1938 issue of pamphlet and November 1938 issue of Monthly Labor Review.

[2] 12-month average for 1929=100. Comparable indexes are in November 1934 and subsequent issues of Employment and Pay Rolls, or in February 1935 and subsequent issues of Monthly Labor Review, except for anthracite and bituminous-coal mining, year-round hotels, laundries, and dyeing and cleaning. Indexes for these industries from January 1929 forward have been adjusted to the 1935 census and are presented in the January 1938 and subsequent issues of Employment and Pay Rolls.

[3] Includes: Iron and steel, machinery, transportation equipment, railroad repair shops, nonferrous metals, lumber and allied products, and stone, clay, and glass products.

[4] Includes: Textiles and their products, leather and its manufactures, food and kindred products, tobacco manufactures, paper and printing, chemicals and allied products, products of petroleum and coal, rubber products, and a number of miscellaneous industries not included in other groups.

TREND OF INDUSTRIAL AND BUSINESS EMPLOYMENT, BY STATES

A comparison of employment and pay rolls, by States and geographic divisions, in March and April 1939 is shown in table 6 for all groups combined and for all manufacturing industries combined based on data supplied by reporting establishments. The percentage changes shown, unless otherwise noted, are unweighted—that is, the industries included in the manufacturing group and in the grand total have not been weighted according to their relative importance.

The totals for all manufacturing industries combined include figures for miscellaneous manufacturing industries (in addition to the 87 manufacturing industries) presented in table 3. The totals for all groups combined include all manufacturing industries, each of the nonmanufacturing industries presented in table 3 (except building construction), and seasonal hotels.

Similar comparisons showing only percentage changes are available in mimeographed form for "All groups combined," for "All manufacturing," for anthracite mining, bituminous-coal mining, metalliferous mining, quarrying and nonmetallic mining, crude-petroleum producing, public utilities, wholesale trade, retail trade, hotels, laundries, dyeing and cleaning, and brokerage and insurance.

TABLE 6.—*Comparison of Employment and Pay Rolls in Identical Establishments in March and April 1939, by Geographic Divisions and by States*

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

Geographic division and State	Total—all groups					Manufacturing				
	Number of establishments	Number on pay roll April 1939	Percentage change from March 1939	Amount of pay roll (1 week) April 1939	Percentage change from March 1939	Number of establishments	Number on pay roll April 1939	Percentage change from March 1939	Amount of pay roll (1 week) April 1939	Percentage change from March 1939
				Dollars					*Dollars*	
New England	12,793	854,627	−1.7	19,530,777	−2.8	3,572	584,570	−2.0	12,630,072	−4.0
Maine	820	53,167	+.6	1,050,250	−.4	276	43,557	+.4	819,793	−1.2
New Hampshire	652	40,767	−3.9	819,136	−4.6	213	33,944	−4.6	657,249	−6.3
Vermont	476	16,499	−2.2	357,393	−.4	149	10,108	−4.3	207,897	−2.8
Massachusetts	[1] *7,781*	*456,121*	*−1.9*	*10,670,714*	*−2.7*	*1,775*	*261,168*	*−2.2*	*5,715,706*	*−4.2*
Rhode Island	1,197	93,195	−3.0	1,937,448	−3.7	435	74,113	−3.5	1,460,221	−4.7
Connecticut	1,867	194,878	−.7	4,695,836	−3.0	724	161,680	−.8	3,769,206	−3.7
Middle Atlantic	31,726	2,003,602	−2.6	52,513,161	−3.9	6,505	1,191,868	−.6	30,100,815	−3.7
New York	20,093	927,354	−.2	25,516,622	−2.0	[2] *2,615*	*433,564*	*−.9*	*11,640,824*	*−3.7*
New Jersey	3,961	355,164	−.2	9,155,636	−2.3	1,625	280,887	−.6	7,082,277	−3.0
Pennsylvania	7,672	721,084	−6.6	17,840,903	−7.2	*2,265*	*477,417*	[3] *−.3*	*11,377,714*	[3] *−4.3*
East North Central	24,821	2,066,221	−.8	55,531,022	−1.5	8,455	1,553,375	−.6	42,587,316	−1.4
Ohio	6,936	520,599	−2.1	13,655,301	−4.5	2,392	394,524	−.6	10,509,074	−3.8
Indiana	*2,946*	*256,150*	*+.1*	*6,486,121*	*−1.0*	*1,084*	*205,824*	[3] *−.1*	*5,298,964*	[3] *−1.1*
Illinois	[4] *6,913*	*591,029*	*−.3*	*15,498,002*	*−1.8*	*2,451*	*388,401*	*−.2*	*10,188,641*	*−1.7*
Michigan	3,639	467,012	−.8	14,021,914	+1.2	*1,049*	*408,467*	*−1.5*	*12,545,265*	*+1.1*
Wisconsin	[5] *4,387*	*251,451*	*+.1*	*15,869,684*	*−.5*	[5] *1,479*	*158,159*	[3] *+.2*	*4,045,374*	[3] *−1.6*

See footnotes at end of table.

TABLE 6.—*Comparison of Employment and Pay Rolls in Identical Establishments in March and April 1939, by Geographic Divisions and by States*—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

Geographic division and State	Total—all groups					Manufacturing				
	Number of establishments	Number on pay roll April 1939	Percentage change from March 1939	Amount of pay roll (1 week) April 1939	Percentage change from March 1939	Number of establishments	Number on pay roll April 1939	Percentage change from March 1939	Amount of pay roll (1 week) April 1939	Percentage change from March 1939
				Dollars					*Dollars*	
West North Central	**11,973**	**440,693**	**+1.0**	**10,698,387**	**+0.2**	**2,519**	**213,995**	**+0.7**	**5,145,424**	+(7)
Minnesota	[8] *2,812*	*128,606*	*+1.6*	*3,424,859*	*+.9*	*654*	*49,351*	*+.2*	*1,291,476*	*+0.9*
Iowa	1,870	61,732	+2.1	1,475,799	+.7	377	35,898	+2.6	895,187	+1.5
Missouri	2,707	157,279	−.4	3,652,104	−1.1	805	93,513	−.4	2,083,873	−1.6
North Dakota	553	4,607	0	111,967	+1.3	29	443	+4.0	11,520	+1.5
South Dakota	471	8,226	+4.6	208,844	+1.8	34	2,514	+2.4	59,466	+4.0
Nebraska	1,006	25,110	+.6	573,353	+.6	136	8,323	+1.1	207,476	+.8
Kansas	[9] *2,554*	*55,133*	[10]*+2.5*	*1,251,461*	[3]*+1.2*	*484*	*23,953*	*+2.7*	*596,426*	*+1.2*
South Atlantic	**10,774**	**807,321**	**−6.2**	**14,891,742**	**−9.4**	**2,936**	**600,388**	**+.3**	**10,356,975**	**−1.4**
Delaware	238	14,848	+2.0	345,754	+1.7	*83*	*11,078*	*+1.7*	*263,537*	*+1.8*
Maryland	*1,618*	*135,585*	*+1.0*	*3,224,730*	+(7)	*655*	*94,222*	[3]*+1.0*	*2,227,516*	[3]*−.6*
District of Columbia	1,041	40,020	+2.0	1,075,062	+2.9	41	3,409	+1.0	118,015	+3.1
Virginia	1,953	105,512	−3.5	1,909,518	−4.8	444	78,825	+.6	1,381,579	−1.0
West Virginia	1,114	76,867	−40.2	1,787,969	−43.2	218	49,586	−1.0	1,200,575	−3.8
North Carolina	1,592	182,324	+.3	2,659,091	−2.5	674	168,032	+.1	2,407,043	−2.9
South Carolina	781	86,564	−(7)	1,215,809	−1.8	245	78,512	−.2	1,069,068	−2.3
Georgia	1,419	118,655	+.1	1,857,771	+.1	391	94,066	−.1	1,342,591	−.4
Florida	1,018	47,006	−2.4	816,038	−3.5	185	22,558	+3.5	347,051	+1.9
East South Central	**4,379**	**265,474**	**−8.7**	**4,684,763**	**−12.2**	**1,029**	**183,613**	**−.5**	**3,146,220**	**−1.6**
Kentucky	1,288	61,500	−22.4	1,192,007	−27.3	288	33,715	−.9	696,395	−1.4
Tennessee	1,232	98,736	−.4	1,735,659	−1.2	364	73,717	+.8	1,261,260	−.3
Alabama	1,369	87,663	−7.4	1,494,977	−11.0	291	64,399	−1.6	1,023,953	−3.3
Mississippi	490	17,575	−.8	262,120	+.1	86	11,782	−1.7	164,612	−1.1
West South Central	**5,666**	**214,092**	**+.8**	**4,737,318**	**+(7)**	**1,257**	**104,850**	**+1.7**	**2,211,632**	**+.1**
Arkansas	[11] *971*	*27,431*	*−1.9*	*449,280*	*−3.6*	*259*	*17,225*	*+.7*	*263,471*	*−4.4*
Louisiana	1,001	52,902	+2.2	1,039,869	+1.4	229	29,151	+3.2	528,512	+2.3
Oklahoma	1,346	39,486	+.5	974,711	+(7)	141	11,350	+1.6	267,671	+2.5
Texas	*2,348*	*94,273*	*+1.1*	*2,273,458*	*+.2*	*628*	*47,124*	*+1.1*	*1,151,978*	*−.9*
Mountain	**3,951**	**113,987**	**+1.0**	**2,848,818**	**−.7**	**551**	**31,386**	**+5.2**	**800,369**	**+4.7**
Montana	589	15,176	+2.1	408,744	+2.9	75	4,049	+4.1	104,534	+3.9
Idaho	452	9,471	+3.4	233,216	+4.1	61	2,603	+14.4	63,402	+25.6
Wyoming	317	7,942	+.2	205,857	−8.4	38	1,277	+6.3	41,640	+4.5
Colorado	1,164	38,019	−1.2	941,342	−3.0	190	13,676	+2.8	365,640	+1.9
New Mexico	273	6,002	+1.7	123,812	−5.0	29	633	+3.4	11,977	+4.9
Arizona	432	14,786	+2.2	396,165	+2.5	38	2,690	+7.2	62,681	+7.8
Utah	550	20,190	+3.3	469,074	+1.6	106	6,192	+7.2	143,413	+4.0
Nevada	174	2,401	−3.4	70,608	−3.6	14	266	−2.9	7,082	−.4
Pacific	**10,752**	**463,417**	**+3.2**	**13,135,735**	**+1.5**	**2,652**	**235,128**	**+5.9**	**6,435,727**	**+3.4**
Washington	2,708	85,687	+1.9	2,345,162	+2.8	543	47,240	+2.6	1,277,592	+3.9
Oregon	1,330	45,953	+2.3	1,234,788	+3.7	299	26,133	+3.2	686,207	+4.9
California	[12] *6,714*	*331,777*	*+3.7*	*9,555,785*	*+.9*	*1,810*	*161,755*	*+7.4*	*4,471,928*	*+3.0*

[1] Includes banks and trust companies; construction, municipal, agricultural, and office employment; amusement and recreation; professional services; and trucking and handling.
[2] Includes laundering and cleaning; and water, light, and power.
[3] Weighted percentage change.
[4] Includes automobile and miscellaneous services; restaurants; and building and contracting.
[5] Includes construction but not public works.
[6] Does not include logging.
[7] Less than 1/10 of 1 percent.
[8] Includes banks; real estate; pipe-line transportation; motor transportation (other then operation and maintenance); water transportation; hospitals and clinics; and personal, business, mechanical repair, and miscellaneous services.
[9] Includes financial institutions, miscellaneous services, and restaurants.
[10] Weighted percentage change, including hired farm labor.
[11] Includes automobile dealers and garages; and sand, gravel, and building stone
[12] Includes banks, insurance, and office employment.

INDUSTRIAL AND BUSINESS EMPLOYMENT IN PRINCIPAL METROPOLITAN AREAS

A comparison of employment and pay rolls in March and April 1939 is made in table 7 for 13 metropolitan areas which had a population of 500,000 or over in 1930. Cities within these areas, but having a population of 100,000 or over, are not included. Footnotes to the table indicate which cities are excluded. Data concerning them are presented in a supplementary tabulation which is available on request. The figures represent reports from cooperating establishments and cover both full- and part-time workers in the manufacturing and nonmanufacturing industries presented in table 3, with the exception of building construction, and include also miscellaneous industries.

Revisions made in the figures after they have gone to press, chiefly because of late reports by cooperating firms, are incorporated in the supplementary tabulation mentioned above. This supplementary tabulation covers these 13 metropolitan areas as well as other metropolitan areas and cities having a population of 100,000 or more, according to the 1930 Census of Population.

TABLE 7.—*Comparison of Employment and Pay Rolls in Identical Establishments in March and April 1939, by Principal Metropolitan Areas*

Metropolitan area	Number of establishments, April	Number on pay roll, April	Percentage change from March	Amount of pay roll (1 week) April	Percentage change from March
New York [1]	14,511	630,198	−0.9	$17,086,497	−3.1
Chicago [2]	4,532	419,699	−.4	11,631,208	−.8
Philadelphia [3]	2,087	200,874	+.1	5,261,252	−3.1
Detroit	1,565	300,916	−1.0	9,706,493	+2.6
Los Angeles [4]	3,004	154,584	+1.6	4,474,484	−.1
Cleveland	1,606	116,217	+.4	3,145,658	−2.5
St. Louis	1,430	117,283	−.1	2,832,573	−1.2
Baltimore	1,176	102,279	+1.6	2,478,315	+.8
Boston [5]	2,964	178,490	−.6	4,488,173	−2.5
Pittsburgh	1,082	153,237	−4.6	4,140,336	−6.2
San Francisco [6]	1,639	82,832	−.2	2,494,095	−.3
Buffalo	805	65,673	+1.1	1,735,466	+2.3
Milwaukee	1,011	99,087	−.5	2,725,024	−1.3

[1] Does not include Elizabeth, Jersey City, Newark, or Paterson, N. J., nor Yonkers, N. Y.
[2] Does not include Gary, Ind.
[3] Does not include Camden, N. J.
[4] Does not include Long Beach, Calif.
[5] Does not include Cambridge, Lynn, and Somerville.
[6] Does not include Oakland, Calif.

Recent Publications of Labor Interest

JUNE 1939

Child Labor and Child Welfare

Child laborers today: Annual report of National Child Labor Committee, for year ending September 30, 1938. By Courtenay Dinwiddie. New York, 1939. 30 pp. (Publication No. 376.)

Emphasizes that only a small fraction of the estimated 850,000 child laborers in the United States are covered by the new Federal Fair Labor Standards Act; calls attention to the increasing army of migrant children and the conditions under which they work and live; and points out that an amendment to the Constitution permitting control of child labor in other than interstate industries is as great a need as ever.

Children engaged in street trades, Detroit, Michigan. Washington, U. S. Children's Bureau, 1938. 38 pp.; mimeographed.

The age provisions of the city ordinance regulating street trades were found to be frequently disregarded, 18 percent of the boys included in the 1938 study being under 12 years of age, the minimum fixed by the ordinance. The night-work provisions were also being violated quite as frequently as those concerning age.

"Far-off cattle have longer horns." By James E. Sidell. (In The Child, U. S. Children's Bureau, Washington, February 1939, pp. 172–176, illus.)

Report on a survey by the National Child Labor Committee of the work of children of migrant families in hop fields in Willamette Valley, Oregon, and Yakima Valley, Washington, during the 1938 hop season.

Conciliation and Arbitration

First annual report of Newark Labor Relations Board, October 1, 1937—October 1, 1938. Newark, N. J., [1939?]. 30 pp., charts; mimeographed.

The first year of the voluntary industrial arbitration tribunal. (In Arbitration Journal, American Arbitration Association, New York, April 1939, pp. 126–137.)

Report of Anthracite Board of Conciliation, Volume XXIV. Hazelton, Pa., [1939?]. 546 pp.

Covers individual grievances and action taken on cases arising in the years 1935 to 1938.

Répertoire méthodique permanent des arrêts de la Cour Supérieure d'Arbitrage. By Pierre Tissier. Paris, Librairie Sociale et Économique, [1938]. Various paging. (Supplément à la revue Droit Social, et Suppléments A et B.)

This review of the decisions of the Permanent Arbitration Court in France deals with questions of procedure and competence, and analyzes the decisions relating to such important problems as wages, hours of work, collective agreements, and workers' delegates.

Cooperative Movement

Consumers' cooperative societies (basic information sources). By Ruth C. Leslie. Washington, U. S. Bureau of Foreign and Domestic Commerce, Division of Business Review, January 1939. 9 pp.; mimeographed.

The people's yearbook, 1939. Manchester, England, Cooperative Wholesale Society, Ltd., [1939?]. 283 pp., illus.

Devoted mainly to the consumers' cooperative movement in various countries throughout the world (especially in Great Britain), but also contains general articles on labor and social and economic conditions.

Annual report of Massachusetts Commissioner of Banks, for year ending December 31, 1938: Part IV, Credit unions. Boston, Department of Banking and Insurance, 1939. xii, 164 pp.

Financial reports of individual credit unions, also summary data for the whole group, for 1938 and previous years.

A statistical handbook of farmers' cooperatives. Washington, U. S. Farm Credit Administration, Cooperative Division, 1939. 334 pp., charts. (Bulletin No. 26.)

A series of reports, each covering an individual State and based upon statistics contained in this general report, are being issued by the various regional banks for cooperatives for the States in their jurisdictions.

How to organize a cooperative club. Brooklyn, Eastern Cooperative League, 1939. 11 pp.; mimeographed.

Simple instructions and bylaws for the use of cooperative buying clubs, especially for clubs in the area served by the Eastern Cooperative Wholesale (New England and Middle Atlantic States).

Cost and Standards of Living

Family income and expenditure in four urban communities of Pacific Northwest, 1935–36: Volume I, Family income. By A. D. H. Kaplan, Faith M. Williams, Mildred Parten. Washington, U. S. Bureau of Labor Statistics, 1939. 297 pp., charts. (Bulletin No. 649; Study of Consumer Purchases, Urban Series.)

Standards of living in Great Lakes cut-over area. By C. P. Loomis, J. J. Lister, D. M. Davidson, Jr. Washington, U. S. Farm Security Administration and Bureau of Agricultural Economics, 1938. 63 pp.; mimeographed. (Social Research Report No. XIII.)

The average value of all the goods and services consumed in 1935 by the 850 open-country families covered in the survey was $1,031, of which 59 percent was purchased. The value of living of the 122 families in villages averaged $851, of which 88 percent was purchased.

Medical service rates to farmers, 1910–14, 1924–29, 1932, and 1935–36. Washington, U. S. Department of Agriculture, 1938. 29 pp., charts. (Income parity for agriculture, Part 3, Section 1.)

As part of a general study of prices paid by farmers for commodities and services, this report shows the expenditures for different items of medical care by farmers in different sections of the country.

Minimum cost of living budget for health and decency in Pittsburgh and Allegheny County. Pittsburgh, Federation of Social Agencies of Pittsburgh and Allegheny County, 1938. 45 pp., bibliography. Revised ed. (Social Research Monograph No. 4.)

Managing in the home on small income. Ottawa, Canadian Welfare Council, 1938. 47 pp., bibliography. (Publication No. 88.)

Suggestions for proper budgeting of small incomes. The values of different foods are given, and a diet list showing the weekly quantities of food needed by individuals of varying age, sex, and activity. Also, the minimum clothing requirements of children of different ages are listed and there is a discussion of housing requirements.

Domestic Service

An occupational analysis of household employment. By Mary Anderson. Washington, U. S. Women's Bureau, 1939. 7 pp.; mimeographed. (Reprinted from proceedings of Seventh International Management Congress, Home Management Section, Washington, D. C., 1938.)

Social security for household employees. By Mary Anderson. Washington, U. S. Women's Bureau, 1939. 4 pp.; mimeographed.

Household employment—a symposium. (In Journal of Home Economics, Washington, February 1939, pp. 86–95.)

The three articles in the symposium deal with W. P. A.'s program of training for housework; the responsibility of the home economist for improving employer-employee relationships in the home; and legislation in the field of household employment.

Arbetsförhållandena inom det husliga arbetet å landsbygden. Stockholm, Socialstyrelsen, 1939. 140 pp.

Report of an official statistical inquiry, made under a royal decree of November 5, 1937, of working conditions in domestic service on farms in Sweden. Printed in Swedish with résumé in French and French translation of table of contents.

Education

Educational activities of Works Progress Administration. By D. S. Campbell, F. H. Bair, O. L. Harvey. Washington, U. S. Advisory Committee on Education, 1939. xiv, 181 pp. (Staff Study No. 14.)

Presents data on vocational, workers', naturalization, and Negro education.

Education for work. By Thomas L. Norton. New York, McGraw-Hill Book Co., Inc., 1939. 263 pp.

This report, in the series giving the results of the Regent's Inquiry into the Character and Cost of Public Education in the State of New York, shows what the secondary schools of that State are doing in regard to the problem of vocational adjustment, with recommendations as to what, in the author's judgment, should be done.

Workers' education in University of Wisconsin. By E. E. Schwarztrauber. (In Labor Information Bulletin, U. S. Bureau of Labor Statistics, Washington, May 1939, pp. 5–7.)

A report on technical education in Australia and New Zealand. By F. H. Spencer. New York, Carnegie Corporation, 1939. 160 pp.

With the exception of Tasmania and some trifling exceptions in New South Wales, all the Australian States have plans for the supervision of apprenticeship and for the obligatory attendance of apprentices at technical schools or colleges during their usual working hours. New Zealand, however, has no such scheme, the argument for not having such provision being that the 40-hour working week makes it unnecessary.

Directory of U. S. Government films. Washington, U. S. National Emergency Council, Film Service, April 1939. 32 pp.

Annotated list of films made by different Government agencies on various phases of their work and on specific subjects. Among the offices represented are the Departments of Agriculture and Labor, National Youth Administration, Public Health Service, and U. S. Housing Authority. No rental is charged for these Government films but exhibitors are asked to pay transportation charges to and from place of exhibition.

Motion pictures for teaching occupations. (In Occupations, the Vocational Guidance Magazine, New York, May 1939, p. 728.)

The fifth in a series of monthly listings of motion-picture films considered of value in occupational instruction. The lists show distributors of the films, rentals, time required to run, and whether silent or sound.

Health and Medical Care

Community health organization—a manual of administration and procedure primarily for urban areas. Edited by Ira V. Hiscock. New York, Commonwealth Fund, 1939. 318 pp. 3d ed.

Health as an element in social security. By George St. J. Perrott and Dorothy F. Holland. (In The Annals, Vol. 202, American Academy of Political and Social Science, Philadelphia, March 1939, pp. 116–136; also reprinted.)

Reviews the extent of sickness and disability with particular reference to needs of dependent and low-income families.

Health and nutrition in India. By N. Gangulee. London, Faber and Faber, Ltd., 1939. 337 pp.

The author gives an account of the food shortage and of other conditions associated with poverty which cause so much misery and loss of life in India, and makes constructive suggestions for improving these conditions.

Medical care in selected areas of the Appalachian bituminous coal fields: A report on conditions of medical service and hospitalization in coal-mining areas of southern West Virginia, Virginia, eastern Kentucky, and northern Tennessee. New York, Bureau of Cooperative Medicine, 1939. 44 pp.; mimeographed.

Sickness and medical care in an Ozark area in Arkansas. By Isabella C. Wilson and William H. Metzler. Fayetteville, University of Arkansas, Agricultural Experiment Station, 1938. 39 pp., charts. (Bulletin No. 353.)

This investigation, covering 322 families in a typical rural Ozark area, showed that the high-income families had better health and fewer sicknesses than those with small incomes.

Housing and Building Construction

Annual report of United States Housing Authority, for fiscal year 1938. Washington, U. S. Department of the Interior, 1939. 61 pp.

Covers the first year of operation and lays particular stress on the establishment of low rents on Government-sponsored projects.

The Fort Wayne housing plan. Washington, Federal Housing Administration, [1939?]. 23 pp., plans, illus.

Describes a low-cost fifty-house program, begun in 1938 by the Housing Authority of Fort Wayne, Ind., to reduce social-welfare costs. The plan is based on making use of land leased at $1 per vacant lot and erecting houses of pre-fabricated sections. This pamphlet shows the factory manufacture of parts as well as erection at the site.

Housing for the machine age. By Clarence Arthur Perry. New York, Russell Sage Foundation, 1939. 261 pp., plans, illus.

Discusses the essentials of a more comprehensive housing policy, giving attention to important matters such as modern living methods, neighborhood, and cheaper and better dwellings.

Small houses. Washington, U. S. Farm Security Administration, 1939. 16 pp., plans, illus.

Illustrated analysis of design, materials, and construction of dwellings built by the Farm Security Administration in connection with its work of rehabilitating farm families. A list of the projects and their location is appended.

Mississippi provides tax-free homes. By M. H. Satterfield. (In National Municipal Review, New York, May 1939, pp. 365–370.)

Summarizes provisions of the legislation for tax exemption on homes and shows its effect on the tax base.

Long cycles in the building industry. By Clarence D. Long, Jr. (In Quarterly Journal of Economics, Cambridge, Mass., May 1939, pp. 371–403; charts.)

A study of the timing and duration of American building cycles, of factors affecting them, and of related characteristics.

Residential building. By Lowell S. Chawner. Washington, U. S. National Resources Committee, 1939. 19 pp., charts. (Housing Monograph Series, No. 1.)

Technical analysis of fluctuations in building residences and the effects of demand and general economic conditions on construction. An attempt is made to measure future needs.

Labor and material costs in small-house construction. Washington, U. S. Bureau of Labor Statistics, 1939. 4 pp. (Serial No. R. 933, reprint from May 1939 Monthly Labor Review.)

Industrial Accidents and Workmen's Compensation

Injury experience in iron and steel industry, 1936 and 1937. By Roy F. Fleming and Jacob Lotven. Washington, U. S. Bureau of Labor Statistics, 1939. 12 pp. (Serial No. R. 935, reprint from May 1939 Monthly Labor Review.)

Accidents in petroleum industry of Oklahoma in 1937, summarized and compared with 1923. By C. F. McCarroll. Washington, U. S. Bureau of Mines, 1939. 19 pp., charts; mimeographed. (Report of Investigations, 3446.)

Discussion of industrial accidents and diseases, 1938 convention of International Association of Industrial Accident Boards and Commissions, Charleston, W. Va. Washington, U. S. Division of Labor Standards, 1939. 204 pp. (Bulletin No. 24.)

Limits of inflammability of gases and vapors. By H. F. Coward and G. W. Jones. Washington, U. S. Bureau of Mines, 1939. 146 pp., charts. (Bulletin 279.)

This report, covering the limits of inflammability and explosibility of a large number of gases under various conditions, is of value to industries handling inflammable gas and especially as regards problems concerning safety in coal mining.

The protection of the miners' health: The problem of hygiene and industrial safety in Silesian coal mines. By Karol Seczyk, M. D. Warsaw, Poland, Institute for Social Problems, 1939. 188 pp., illus. (Industrial Accidents and Hygiene Series, No. 40.)

In Polish, with brief summary in English and an English translation of table of contents.

Safety provisions of British Factories Act, 1937. By G. Stevenson Taylor. (In Industrial Safety Survey, International Labor Office, Geneva, March–April 1939, pp. 29–34.)

Workmen's compensation: Statistics of compensation and proceedings under Workmen's Compensation Acts and Employers' Liability Act, 1880, in Great Britain during 1937. London, Home Office, 1939. 32 pp. (Cmd. 5955.)

Contains statistics as to compensation paid during 1937 in certain groups of industries, general statistics in regard to administration of the compensation acts, and information on compensation for silicosis and asbestosis.

Industrial Relations

Does American labor stand to win or lose by trade agreements? By Francis B. Sayre. (In Political Science Quarterly, New York, June 1939, pp. 175–186.)

Fair labor standards—what are they? By Jean A. Flexner and Esther Cole Franklin. Washington, American Association of University Women, [1939?]. 142 pp, charts; mimeographed. (Social Studies Series.)

Revision and extension of a guide used by 20 study groups in the spring of 1938.

Fundamental rights of employers and employees. San Francisco, The Commonwealth—Part Two, Journal of Commonwealth Club of California, February 28, 1939; 33 pp.

Oppressive labor practices—summary of Senate inquiry. Washington, U. S. Bureau of Labor Statistics, 1939. 8 pp. (Serial No. R. 934, reprint from May 1939 Monthly Labor Review.)

The strategy of industrial peace. By Harold J. Ruttenberg. (In Harvard Business Review, Volume XVII, No. 2, New York, 1939, pp. 159–176; also reprinted.)

A description, by the director of the Steel Workers' Organizing Committee, of the manner in which two steel firms adjusted themselves to the collective-bargaining situation.

Strife in the maritime industry. By Philip Taft. (In Political Science Quarterly, New York, June 1939, pp. 216–236.)

International Labor Conditions

Program of International Labor Conference of June 1939. By John S. Gambs. Washington, U. S. Bureau of Labor Statistics, 1939. 6 pp. (Serial No. R. 918, reprint from April 1939 Monthly Labor Review.)

The world of industry and labor, 1939: Report of Director [of International Labor Office], to twenty-fifth session of International Labor Conference, June 1939. Geneva, International Labor Office, 1939. 92 pp., charts.

The report consists of a foreword by the Director followed by a general summary of the economic setting in the different countries, of conditions of work, and of the standard of life. The Director points out that the disturbed relations between countries, with the diversion of productive capacities to increased armaments and military preparedness, will have an increasingly adverse effect on the standard of living and the health and safety of the workers, and even in the case of a general international settlement there will be tremendous problems of readjustment to a peace-time economy. In facing the difficulties ahead, the Director states that "the machinery of the International Labor Organization with its possibilities of analyzing experience and information drawn from many countries and the contacts which it can provide between Government officials and workers' and employers' leaders, who will be engaged in this task, can be of immense value." To meet these needs the International Labor Office must have at its command the necessary resources, and the Director deplores the present inadequate resources of the Office, since "the present international political crisis calls not for a contraction of activities but for an increasing effort and greater energy."

Report of Director [of International Labor Office] to International Labor Conference, twenty-fifth session, Geneva, 1939: Appendix tables showing situation of States members in respect of conventions and recommendations adopted by International Labor Conference. Geneva, International Labor Office, 1939. 63 pp.

Summary of annual reports under Article 22 of constitution of International Labor Organization, to International Labor Conference, twenty-fifth session, Geneva, 1939. Geneva, International Labor Office, 1939. 372 pp.

Summarizes the reports for the period October 1, 1937, to September 30, 1938, of the member states of the International Labor Organization on measures they have taken to make effective the provisions of conventions to which they are parties.

Labor and Social Legislation

Labor law. By Abraham Rotwein and Noah Rotwein. Brooklyn, Harmon Publications, 1939. xxiii, 259 pp.

This survey of elementary doctrines covers the early history of collective labor action; legal ends of labor pressure; strikes and boycotts and their concomitants; labor injunctions; union labels; trade agreements; National Labor Relations Act; and Fair Labor Standards Act of 1938. A list of the cases cited is included.

Labor legislation and inspection in Algeria. (In Industrial and Labor Information, Geneva, April 24, 1939, pp. 543–547.)

Summary of a recent report by the Governor General of Algeria on new labor regulations issued in connection with the enforcement of the new social laws in France. The regulations cover collective agreements, conciliation and arbitration, employment and unemployment, hours of work, wages, weekly rest, holidays with pay, and industrial hygiene and safety.

The right to organize—recent Canadian legislation. Kingston, Ontario, Queen's University, Industrial Relations Section, 1938. 20 pp., bibliography. (Bulletin No. 2.)

The Illinois poor law and its administration. By Sophonisba P. Breckinridge. Chicago, University of Chicago Press, 1939. 541 pp. (Social Service Monograph.)

The development of the Montana poor law. By Frederic R. Veeder. Chicago, University of Chicago Press, 1938. 131 pp. (Social Service Monograph.)

Small loan legislation (with particular reference to California Personal Property Brokers' Act). By Jack E. Thomas. Berkeley, University of California, Bureau of Public Administration, 1939. 25 pp., bibliography; mimeographed. (1939 Legislative Problems, No. 1.)

Includes an analysis of the act referred to in the title, a comparison of its terms with those of the model uniform small-loan law developed by Department of Remedial Loans of Russell Sage Foundation, and a table giving the principal provisions of the small-loan legislation in other States.

Labor Organization and Activities

The Amalgamated—today and tomorrow: The accomplishments, the policies and the aims of the organized clothing workers of the Nation. New York, Amalgamated Clothing Workers of America, 1939. 144 pp., illus.

Brief account of the 25-year span of life of the Amalgamated Clothing Workers, laying particular emphasis on the outstanding features of its 1938 convention at Atlantic City, with a vivid summary of the more recent activities of the Amalgamated, especially among laundry and textile workers.

The Electrical Workers International Brotherhood. By D. W. Tracy. (In Labor Information Bulletin, U. S. Bureau of Labor Statistics, Washington, May 1939, pp. 1–4; illus.)

The present status of labor unions in the South. By Frank Traver De Vyver. (In Southern Economic Journal, Chapel Hill, N. C., April 1939, pp. 485–498.)

The article includes a tabulation giving estimated union membership, by major industry groups and by unions, as of October 1938.

Some problems of the new unionism in the United States. By Philip Taft. (In American Economic Review, Evanston, Ill., June 1939, pp. 313–324.)

Trade unionism as a factor in recent American wage movements. By Z. Clark Dickinson. (In International Labor Review, Geneva, May 1939, pp. 611–632; also reprinted.)

Occupations

An occupational study of the aircraft manufacturing industry in California. By Edward G. Stoy and Frances W. Strong. San Francisco, National Youth Administration of California, 1939. 69 pp., illus.; mimeographed.

The second in a series of studies by the National Youth Administration of California to acquaint youths with occupations open to them. The first study covered the fruit and vegetable canning industry in the State.

Occupations in automotive service. Edited by Julia N. North. Atlanta, National Youth Administration of Georgia, 1939. 35 pp., bibliography; mimeographed.

Careers in consumer cooperation. By Clarence W. Failor. Chicago, Science Research Associates, 1939. 48 pp., charts, illus. (Occupational Monograph 3.)

Summary material from a larger report soon to be issued. Deals with general qualifications for cooperative workers and the status of cooperative employees, and discusses certain positions in cooperative employment (managers, distributive jobs, and other positions) from the point of view of what they offer to young people entering the labor market.

Jobs in rural journalism. By Elmo Scott Watson. Chicago, Science Research Associates, 1939. 48 pp., charts, bibliography. (Occupational Monograph 4.)

Said to be the first attempt to bring together scattered and uncorrelated facts concerning this particular division of the newspaper world.

Careers in the mineral industries: A vocational booklet for use in secondary schools. By Thomas T. Read. New York, American Institute of Mining and Metallurgical Engineers, 1939. 32 pp.

The vegetable canning industry. By Lotys Benning. Indianapolis, National Youth Administration of Indiana, 1938. 74 pp., charts, bibliography; mimeographed.

This first report in a series of occupational studies to be made by the Indiana National Youth Administration deals with one of the largest industries in the State. Information is presented on the canning process, occupations, working conditions, employment, and earnings. One chapter discusses future trends in the industry.

Reports for Special Industries

Questions and answers for Beauty Shop Minimum Wage Board, Connecticut. Hartford, State Department of Labor, Minimum Wage Division, 1939. 16 pp., charts; mimeographed.

Contains data on conditions of employment, working hours, and weekly and yearly earnings of woman workers in Connecticut beauty shops.

La situation du métier de coiffeur en Suisse. Berne, Département Fédéral de l'Économie Publique, 1939. 83 pp. (32e supplément de "La Vie Économique".)

Report of investigation by Swiss Price Study Commission of situation in barber and hair-dressing industry. The data cover number of employees, working conditions, prices, and wages.

Pennsylvania iron manufacture in eighteenth century. By Arthur Cecil Bining. Harrisburg, 1938. 227 pp., illus.; bibliography. (Publication of Pennsylvania Historical Commission, Vol. IV.)

This volume summarizes several years of intensive research. The iron industry of Pennsylvania was so similar to the industry in other parts of the country that the information contained in this volume enables one to form a clear conception of the methods and organization of the industry in general. A chapter on "The iron plantations" pictures the entire community life, agricultural as well as industrial, centering around the iron industry; two chapters describe in detail the early processes of iron making; and separate chapters are devoted to the workers and their employers.

The sugar economy of Puerto Rico. By Arthur D. Gayer, Paul T. Homan, Earle K. James. New York, Columbia University Press, 1938. 326 pp.

A study of the structure, operation, and economic place of the sugar industry of the Island. Among the subjects treated are population and social friction, employment and hours of labor, wages and earnings, supplemental incomes, and collective labor agreements.

Social Security

Social security. By Maxwell S. Stewart. New York, W. W. Norton & Co., 1939. 398 pp. Revised and enlarged edition.

The struggle for economic security in democracy. (In Social Research, New York, May 1939, pp. 135–312.)

This issue of Social Research is devoted to the proceedings of a symposium on the struggle for economic security in democracy, conducted in March 1939 by Graduate Faculty of Political and Social Science of New School for Social Research, New York City. The subjects covered include reemployment policies in various countries, adjustment of prices and costs as a means of stabilization, and the right to work.

Reseña de las operaciones de la Caja de Seguro Obligatorio hasta el 30 de Junio de 1938. By Juan B. Salas S. (In Previsión Social, Departamento de Previsión Social, Ministerio de Salubridad, Previsión, y Asistencia Social, Santiago, Chile, January-February 1939, pp. 377–403.)

The legal background and the organization of the Compulsory Sickness, Disability, and Old Age Insurance Fund of Chile are briefly described, followed by a report on the social work done by the Fund and of receipts and expenditures, especially since July 1, 1935.

The organization of social insurance in Greece. By Ioannes Zarras. (In International Labor Review, International Labor Office, Geneva, May 1939, pp. 579–610.)

Recent developments in social insurance in the Netherlands. (In Industrial and Labor Information, International Labor Office, Geneva, April 17, 1939, pp. 504–509.)

L'assistenza sociale nell'impero Romano. By Francesco Orestano. (In Le Assicurazioni Sociali, Istituto Nazionale Fascista della Previdenza Sociale, Rome, November–December, 1938, pp. 961–969.)

A well-documented account of social welfare measures inaugurated by the Roman emperors beginning with Augustus, including Government aid to victims of disasters, poor relief, family allowances, marriage allowances, loans without interest in time of economic crisis, distribution of grain in time of scarcity, and cancellation of debts owed to the Government.

Technological Changes

Changes in farm power and equipment—tractors, trucks, and automobiles. By Eugene G. McKibben and R. Austin Griffin. Washington, U. S. Works Progress Administration, 1938. xv, 114 pp., charts, illus. (Studies of

Changing Techniques and Employment in Agriculture, National Research Project, Report No. A–9.)

The history of the use of tractors, trucks, and automobiles on farms is traced, the main improvements in these types of equipment are described, and the principal effects are analyzed, including the direct and indirect effects on employment. The recent increased use of these types of farm equipment, especially in areas where their use had previously been most restricted, as in the sharecropper areas of the South, is an important factor in the displacement both of tenants and of hired workers. The seriousness of the displacement varies with the extent of opportunity, usually slight, for shifts to other employment.

Changes in technology and labor requirements in crop production—wheat and oats. By Robert B. Elwood and others. Washington, U. S. Works Progress Administration, 1939. 182 pp., charts, illus. (Studies of Changing Techniques and Employment in Agriculture, National Research Project, Report No. A–10.)

Mechanization in Australian industries. By F. R. E. Mauldon assisted by D. L. Anderson and May W. Marks. Hobart, University of Tasmania, Department of Economics and Commerce, 1938. 80 pp., charts; mimeographed. (Research Monograph No. 1.)

Part of an extended inquiry into mechanization suggested by the International Institute of Intellectual Cooperation of the League of Nations. The Australian investigation covers shifts in the occupations of the people and mechanization in different industries.

Vocational Rehabilitation

Industrial rehabilitation: Ninth biennial report, Industrial Rehabilitation Division, Wisconsin State Board of Vocational and Adult Education. Madison, 1938. 29 pp., charts. (Bulletin No. 24.)

The report discloses a growing demand for rehabilitation services for physically handicapped persons, and indicates that there is a great variety of job possibilities for those who are properly trained. According to the director of the State Board of Vocational and Adult Education, the rehabilitation program of that office "has transferred human economic liabilities into taxpaying assets."

Vocational rehabilitation of the physically disabled. By Lloyd E. Blauch. Washington, U. S. Advisory Committee on Education, 1938. 100 pp. (Staff Study No. 9.)

Traces the evolution of Federal cooperation in vocational rehabilitation and discusses methods and procedures; extent of the program; economic, social, and fiscal aspects; State organization and administration; Federal organization and service; and special service for the blind.

La reeducación de inválidos del trabajo en Cuba. By José F. Urrutia. (In Informaciones Sociales, Caja Nacional de Seguro Social del Peru, Lima, April 1939, pp. 427–431.)

Account of the work done in Cuba by the Cuban Institute for the Rehabilitation of Disabled Workers.

Wages and Hours of Labor

Annual earnings in 68 northern furniture factories, 1936. Washington, U. S. Bureau of Labor Statistics, 1939. 8 pp. (Serial No. R. 916, reprint from April 1939 Monthly Labor Review.)

Trends in compensating salespeople. New York, National Retail Dry Goods Association, 1938. 76 pp.

Analysis of wage-payment methods in retail stores.

Statistics of education of Negroes, 1933–34 and 1935–36. By David T. Blose and Ambrose Caliver. Washington, U. S. Office of Education, 1939. 67 pp., charts. (Bulletin, 1938, No. 13.)

Compares the average annual salaries of Negro and white instructional personnel in the public schools in 16 States and the District of Columbia.

Third report of Burnham Committee on Scales of Salaries for Teachers in Secondary Schools, England and Wales, July 1938. London, Board of Education, 1939. 41 pp.

Time rates of wages and hours of labor in Massachusetts, 1938. Boston, Department of Labor and Industries, 1939. 100 pp. (Labor Bulletin No. 179.)

Regulation of agricultural wages in England. By George T. Starnes. (In Southern Economic Journal, Chapel Hill, N. C., April 1939, pp. 499–510.)

Describes the machinery established by law for regulating agricultural wages, and its operation.

Wages in Germany in 1938. Washington, U. S. Bureau of Labor Statistics, 1939. 18 pp. (Serial No. R. 925, reprint from April 1939 Monthly Labor Review.)

General Studies

America in midpassage. By Charles A. Beard and Mary R. Beard. New York, Macmillan Co., 1939. 977 pp. (Vol. III of The Rise of American Civilization.)

This volume, extending the authors' well-known work on The Rise of American Civilization, covers the period from 1929 to 1938. There is no chronological narrative of events but virtually all phases of American life are described and fitted into the general narrative. Extensive discussions or full chapters are devoted to such topics as urban and rural labor, popular entertainments, social thought, the social significance of contemporary literature, and the reconstruction of democracy.

America now: An inquiry into civilization in the United States. By thirty-six Americans; edited by Harold E. Stearns. New York, Literary Guild of America, Inc., 1938. 606 pp.

Some of the 36 contributions that have a special labor interest are "The new labor movement," "Invention," "Public opinion," "Radicalism," "The law," and "The Negro." Three of the articles deal with "American civilization from the foreign point of view."

Labor problems in the United States. By Mac H. Donaldson. New York, Longmans, Green & Co., 1939. 289 pp.

Social work year book, 1939: A description of organized activities in social work and related fields. Edited by Russell H. Kurtz. New York, Russell Sage Foundation, 1939. 730 pp.

The fields of activity reviewed cover a wide range and include adult education, employment services, health insurance, housing and city planning, labor legislation and administration, legal aid, work among Negroes, old-age assistance and pensions, trade unionism in social work, unemployment insurance and relief, vocational guidance and rehabilitation, workmen's compensation, and youth programs. Agencies working in these and other fields covered in the volume are listed, and brief reading lists accompany each topical article.

These are our lives. As told by the people and written by members of Federal Writers' Project of Works Progress Administration in North Carolina, Tennessee, and Georgia. Chapel Hill, University of North Carolina Press, 1939. xx, 421 pp.

The plan, as described in the preface, called for recording the life histories of typical individuals on farms, in factories, and in service occupations in a form that would be readable and that would faithfully represent living persons. At the same time, every effort was made to give a fair picture of society, to portray the quality of life, and to reveal the real workings of institutions, customs, and habits.

Industrial labor in India. Geneva, International Labor Office (American branch, 734 Jackson Place NW., Washington), 1938. 335 pp. (Studies and Reports Series A, No. 41.)

An introductory chapter describes the geographical, social, and political setting of the problems of industrial labor in British India; the succeeding chapters deal with the nature and extent of industrial employment, labor legislation, industrial relations, employment and unemployment, health and safety, hours of work, wages, standard of living, and housing and welfare.

Social service in India: An introduction to some social and economic problems of the Indian people. By 6 contributors. Edited by Sir Edward Blunt. London, His Majesty's Stationery Office, 1938. xxiii, 447 pp., diagrams, maps, illus.

In the section on industrial labor the subjects discussed include classification of Indian industries—organized and unorganized; sources of labor; recruitment of labor; industrial legislation; trade unions; industrial disputes; and housing. In other parts of the volume data are presented on environment, distribution, and structure of the Indian people; the rural community; agriculture; medicine and public health; education; and cooperative movement.

Publications and articles on Latin America, 1929–1939. Compiled by Eugene D. Owen. Washington, Pan American Union, 1939. 6 pp.; mimeographed. (Reprinted from Pan American Book Shelf, May 1939, pp. 36–41.)

Acción social del estado en el Peru. Lima, Ministerio de Salud Pública, Trabajo y Previsión Social, Dirección de Previsión Social, 1938. 64 pp., illus.

Describes general conditions of life and work in Peru, and gives an account of Government action in the field of labor and social welfare during the administration of General Oscar R. Benavides, beginning May 1, 1933. The subjects on which information is given include workers' housing, compulsory social insurance, protection of workers, free legal aid for workers, the labor contract, wages and hours, paid vacations, workmen's accident compensation, conciliation, and arbitration.

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